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LIST OF ABBREVIATIONS

AD	Anno Domini *in the year of Lord*
ASL	Above Sea Level
BOD	Biological Oxygen Dissolved
CARG	Compound Annual Growth Rate
CBO	Community Based Organization
CDP	City Development Plan
CIP	City Investment Plan
CO_2	Carbon Dioxide
COD	Chemical Oxygen Dissolved
CPCB	Central Pollution Control Board
CUR	Capital Utilization Ratio
Dept.	Department
°C	Degree Celsius
DIC	District Industrial Centre
DCH	District Census Handbook
DO	Dissolved Oxygen
DSR	Debt Service Ratio
EIUS	Environmental Improvement of Urban Slums
EWS	Economic Weaker Setion
FC	Fixed Carbon
GIS	Geographic Information System
GT	Grand Trunk Road
GNDU	Guru Nanak Dev University
HH	House Hold
HUDCO	Housing & Urban Development Corporation

JBIC	Japan Bank International Corporation
JNNURM	Jawaharlal Nehru National Urban Renewal Mission
LPCD	Litre Per Capita per Day
MCA	Municipal Corporation Amritsar
MIS	Municipal Information System
MLD	Million Litre per Day
MRTS	Mass Rapid Transport System
MSC	Mohalla Sudhar Committe
MSL	Mean Sea Level
MSW	Municipal Solid Waste
MUG	Millennium Development Goal
NGO	Non Governmental Organization
NH	National Highway
NMV	Non Motorised Vehicle
NO_X	Nitrogen Oxide
NRI	Non Residential Indian
OHR	Over Head Reservoir
OHSR	Over Head Supply Reservoir
OR	Operating Ratio
%	Percentage
pH	It is a measure of the activity of hydrogen ions (H+) in a solution and, therefore, its acidity or alkalinity.
PO	Post Office
PPP	Public Private Participation
ppm	Part per particulate matter
PRTC	Punjab Road Transport Corporation
PSEB	Punjab State Electricity Board
PSU	Public Sector Undertaking
PUDA	Punjab Urban Planning & Development Authority
PWD	Public Works Department
PWSSB	Punjab Water Supply & Sewerage Board
ROB	Road over Bridge
Rs.	Rupees
RSPM	Respiratory Suspended Particulate Matter
RTO	Road Transport Organization
SEB	State Electricity Board
SGPC	Sheromani Gurdwara Parbandhak Committee

SHG	Self Help Group
SOI	Survey of India
SO_2	Sulphur Oxide
SPCB	State Pollution Control Board
SPM	Suspended Particulate Matter
SWM	Solid Waste Management
SWOT	Strength – Weakness – Opportunity – Threat Analysis
TC	Total Carbon
TDS	Total Dissolved Solid
UDPFI	Urban Development Plans Formulation and Implementation
UK	United Kingdom
ULB	Urban Local Bodies
UNDP	United Nations Development Program
USA	United States of America
VAMBAY	Valmiki Ambedkar Awas Yojna
VAT	Value Added Tax

Unit Abbreviations:

- Hectare (Ha or ha)
- Meter (m) / Square meter (sq. m)
- Kilometer (km) / Square kilometer (sq. km)
- Kilometer per hour (kmph)
- Feet (ft.)
- Percentage (%)
- Cubic meter (cu. m)

CHAPTER - 1: PROJECT BACKGROUND

1.1 PROJECT BACKGROUND

The Government of Punjab through Municipal Corporation Amritsar (MCA) has decided to take up preparation of City Development Plan – Amritsar 2025 under Jawaharlal Nehru National Urban Renewal Mission (JNNURM). The thrust of the JNNURM is to ensure improvement in urban governance and service delivery so that Urban Local Bodies (ULBs) become financially sound and sustainable for undertaking new programme. It is also envisaged that, with the charter of reforms that are followed by the State governments and ULBs, a stage will be set for Public Private Participations (PPP). The duration of the Mission is seven years beginning from the year 2005-06. Evaluation of the experience of implementation of the Mission is to undertaken before the commencement of Eleventh Five Year Plan.

1.2 AIM & OBJECTIVE

The aim is to encourage reforms and fast track planned development of the identified cities under JNNURM. Focus is to be on efficiency in urban infrastructure and service delivery mechanisms, community participation and accountability of ULBs/ Parastatal agencies towards citizens. The objectives of the JNNURM are to ensure that the following are achieved in the urban sector:

- Focus on attention to integrated development of infrastructure services.
- Establishment of linkages between asset-creation and asset-management through a initiation of a set of reforms.
- Ensuring adequate funds to meet the deficiencies in urban infrastructure services.
- Planned development.
- Scale-up delivery of amenities.
- Provision of utilities to the urban poor.
- Reducing congestion through urban renewal programme for the old city.
- Security of tenure at affordable prices, improved housing, water supply and sanitation, and ensuring delivery of other existing universal services of the government for education, health and social security.

1.3 SCOPE OF WORK

The JNNURM requires a City Development Plan (CDP) and financial strategy to be prepared as a precondition for cities under this mission. The integration of Master Plan prepared under the statute and the CDP is necessary to achieve desired results. Nonconforming industrial and commercial establishment is to be shifted to confirming landuse. The CDP should be prepared within the framework of draft Master Plan of Amritsar.

The CDP's scope focuses on:

- Improvement in infrastructure level.
- Strengthening of municipal government and their financial accounting etc.
- Accountability and transparency.

- Elimination of bottlenecks.
- Development of inner city area.
- Heritage conservation and decongestion of core city.
- Improvement in urban traffic and transportation.
- Upgrading of slums and shelter for urban poor.

The Scope has been defined in two Sub- Missions:

(1) Sub-Mission for Urban Infrastructure and Governance

The main thrust of the Sub-Mission is on infrastructure projects relating to water supply and sanitation, sewerage, solid waste management, road network, urban transport and redevelopment of old city areas with a view to upgrading infrastructure therein, shifting industrial and commercial establishments to conforming areas, etc.

(2) Sub-Mission for Basic Services to the Urban Poor

The main thrust of the Sub-Mission is on integrated development of slums through projects for providing shelter, basic services, and other related civic amenities with a view to providing utilities to the urban poor.

1.4 STRATEGY OF THE MISSION

- Prepare a City Development Plan: indicating policies, program and strategies, and financing plans.
- Identification of projects: lifecycle cost of projects covers capital outlays and operation and maintenance cost, creating revolving funds.
- Release and Leveraging of Funds: catalyst flow of investment in infrastructure.

1.5 CITY DEVELOPMENT PLANNING PROCESS

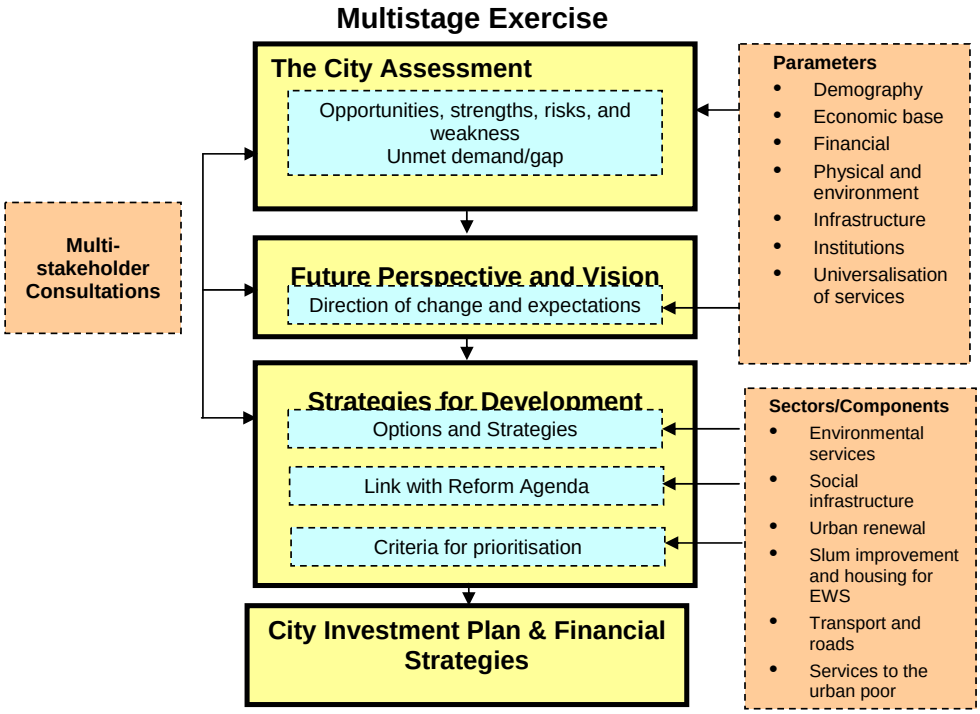
The City Development Plan[1] presents a perspective of and a vision for future development of the city. Essentially it addresses the following questions:

1. Where are we now?
2. Where do we want to go?
3. What issues do we need to address on a priority basis?
4. What interventions do we make in order to fulfill the vision?

The framework for preparing CDP as outlined in JNNURM toolkit is presented below. The key aspect of preparation of CDP is that of involving community in decision process.

[1] GoI, JNNURM Toolkit

Figure 1-1: City Development Planning Process



1.6 CITY CONSULTATIONS

The city of Amritsar has been prepared through consultative process. The process and proceeding of the consultations have been presented below.

The process of preparation of CDP Amritsar was started on April 19th, 2006, with an in-house meeting involving MCA officials. It was a kick-off meeting for the CDP process to create awareness regarding JNNURM programme. The objective of the meeting was to secure the implementing agency's view on development issues of Amritsar, and the areas, which deserve focus in the interests of the city's development.

MCA held stakeholders' consultation on 13.06.2006, to outline the vision for the growth of the city of Amritsar until 2025. The objective of the meeting was to bring all stakeholders on one platform and enable them to voice their opinion and come to consensus on strategies and actions for each of the identified planning sectors i.e. physical and social infrastructure, tourism conservation, municipal reforms, etc.

The Stakeholders

Presentation made by the Consultants

The stakeholders' consultation involved representatives of various government departments and other agencies including Municipal Corporation of Amritsar, Pollution Control Board, Divisional Town Planner, Industry Department, Public Health Department, Punjab Roadways, Secretary of Lion's Club-Amritsar, Executive member of Aga Heritage Club and NGO's etc.

In addition, a SWOT analysis of the Amritsar city as a whole with focus on MCA as an organization were presented. Throughout the presentation, feedbacks were taken from the stakeholders' for the future development of the city.

Supplementary interviews, surveys and discussions

The Discussion

As part of the project development activity related to Amritsar, Water Supply & Sewerage Project, in order to develop a more complete understanding of the present water supply and Waste water and sanitation situation in Amritsar three key activities have been undertaken:

- Interview-type surveys have been conducted at a representative sample of households throughout the city (10 households in each of the 60 wards).
- A series of 12 transect walks in different sections of the city have been carried out to identify problems at first-hand through discussions with members of the communities served.
- Discussions have been held with NGOs such as the All India Women's Conference - Amritsar Branch, and the Guru Nanak Dev University.

This report lays its basis on outcomes of these consultations.

The report has been presented in 10 chapters. After presenting a brief background of the study, the following chapter presents a profile of the city in terms of history, population growth, spatial patterns of growth and urban economy. Chapter 3 reviews the Heritage Resources. Chapter 4 reviews the Environmental Services. In Chapter 5 Urban Transport Scenario has been analysed. The Chapter 6 deals with urban poor and their housing situation. Chapter 7 and Chapter 8 deals with the Institutional Framework and Urban Finances respectively. Chapter 9 deals with the vision, strategies and action plans and concluding Chapter 10 analyses the investment sustainability through a Finance and Operating Plan.

CHAPTER - 2: CITY PROFILE

2.1 INTRODUCTION

The holy city Amritsar is a flourishing trading city of the state of Punjab. The city has traditionally been a trade link to central Asia, Europe and China for the Indian subcontinent. It has the potentiality to become major trade and export centre of the country. The city is known for its religious significance, cultural vibrancy that is rooted in its folk traditions and social harmony. Due to disturbances in the 80's and the 90's the growth had slowed down. However, during the past decade the city experienced a rapid growth. Trade between Pakistan and India improving, the prospectus of Amritsar as a trade centre has improved. The economy has shown vibrancy which is visible in the new developments dawn in the city-scape. The number of people visiting Amritsar has increased many folds. According to an estimate about 50,000 people visit Golden temple everyday. All these have impact over the socio-economic context of the city.

2.2 HISTORICAL BACKGROUND

Guru Ramdas, fourth Guru of Sikh faith, in the year 1577 AD, founded the city of Amritsar. He encouraged people from various trades and professions to take up residence here. The town expanded further under his son and successor, Guru Arjun Singh who completed construction of the holy shrine, Harimandar in the middle lined tank, now famous as the Golden Temple and also constructed two more tanks, Santokhsar and Ramsar, near by. It was on the bank of Ramsar that he carried out the compilation of the Adi Granth (later Guru Granth Sahib). With the installation on 16 August 1604 of the Granth Sahib in the Harimandar, the shrine and the sacred pool *(amrit + sarovar = Amritsar)* surrounding it together became the central attraction of the town and a site of pilgrimage for Sikhs from far and near.

Ancient Amritsar around Golden Temple

Martyrs well at Jallianwalla Bagh

During the independence movement, Amritsar became one of the prominent centers for freedom struggle. The iniquitous Jallianwala Bagh incident and the atrocities by the British's here, has been one of the most merciless events in the history of India as well as world.

Amritsar is the sub-divisional administrative headquarter. It was being served under Municipality since 1868, which was converted into Municipal Corporation in 1977. It serves as a major education and health centre to its surrounding region. This city is, also, an industrial centre of Punjab, which has overcome the constraints of non-availability of raw materials and consumer market over the years. The growth of the city is attributed to the local entrepreneurial

skills of the people of Punjab. Its contribution to our freedom struggle as well as global pilgrimage has brought Amritsar on forefront in landmark of India.

2.3 REGIONAL SETTING

2.3.1 GEOGRAPHICAL LOCATION

Punjab, located in the north west of India, is a prosperous state. The five rivers Sutlej, Beas, Ravi, Chenab and Jhelum gave it its *name 'Punj-ab'* or the *'land of five waters'*. Punjab is primarily an agricultural state and enjoys the natural benefits of fertile soils and abundant waters.

Amritsar city is a border city located in the northern western part of the state with an area of 139 Sq. Km. The location coordinates are $31^0$07' to $32^0$03' North latitude and $74^0$29' to $78^0$23' East longitude. It is 228 km west of state capital of Chandigarh, 82 km from Jalandhar and well connected with other parts of the country by air, road and railway. (Refer Map 2.1)

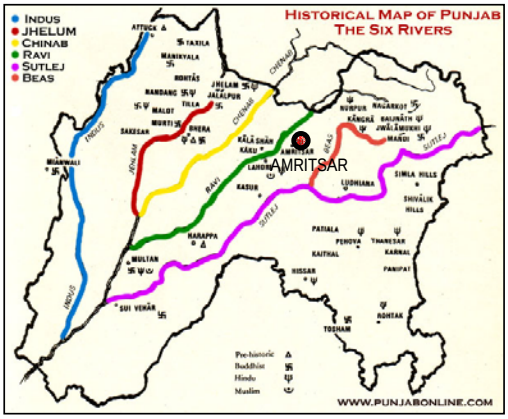
Wind rose of Amritsar is presented in Annex – 2.1. Winds are predominantly from west to north from October to May. In June, they reverse the direction to NE to SE till the end of September.

2.3.2 PHYSIOGRAPHY

Amritsar district lies between the Beas river to the east and the Ravi river the Upper Bari Doab, is one of the inter-fluvial tracts of the Punjab Plain. The Beas river separates the Amritsar district from Kapurthala district. Amritsar has an altitude of 230 m from ASL. It is bowl shaped hence floods certain areas with even small rainfall. The track is alluvial plain with light reddish yellow clayey soil.

The important physiographic division of the district is as follows:

(a) Upland Plain,
(b) The flood plain of the Ravi,
(c) The Bluff along the Beas,
(d) The floodplain of the Sutluj,
(e) The district is a continuous level plain unbroken by hills on valleys with a flat topography

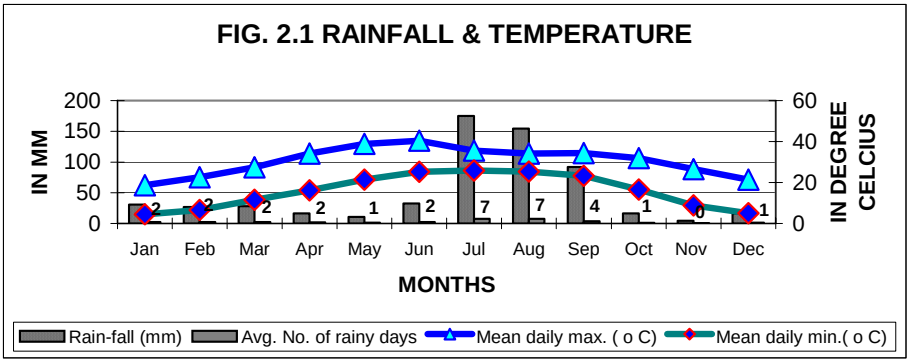


Amritsar between Ravi and Beas River

It is mainly an agricultural district. The principal kharif crops are paddy, cotton, maize and sugarcane, whereas main ones or subsidiary crops are kharif vegetables. The principal rabi crops are wheat, gram, barley and barseem. Amritsar caters the need of surrounding areas as a major commercial centre and agriculture product distribution centre.

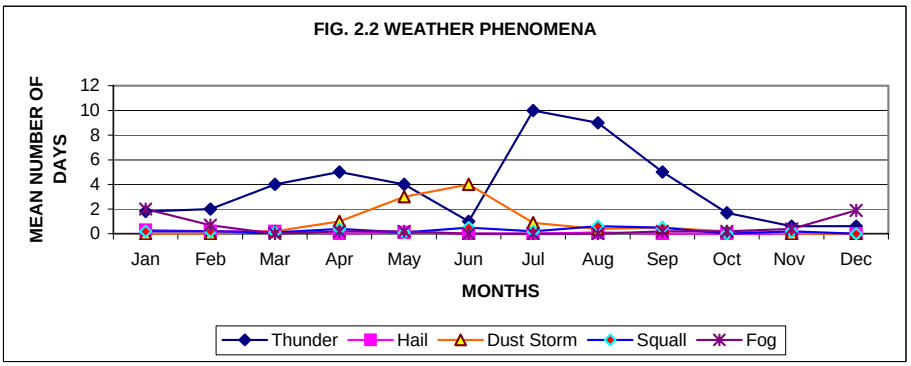
The climate is characterized by generally dry weather except in the brief southwest monsoon season, a hot summer and bracing winter. November to March is cold season, April to June is hot season, July to September is monsoon and following period till November is post monsoon season. Amritsar receives on an average 601.5 mm of rainfall with 32.7 rainy days.

The following exhibit depicts the climatic characteristics prevailing in Punjab state. The general rainfall and temperature distribution throughout the year has been depicted below:



Source: Climate of Punjab, Indian Metrological Department, 1996

Special weather phenomena are as follows:



Source: Climate of Punjab, Indian Metrological Department, 1996

For details refer Annex 2.2

2.4 PHYSICAL GROWTH OF CITY

Maharaja Ranjit Singh built the walled city in 1825. The city is within a depression and by the year 1849 the wall started crumbling, some part of it was reconstructed, and it had 12 strong gates for protection of its traders from invaders. It has a lot of commercial activity and many old bazaars still existing. At present, it suffers from uncontrolled urban sprawl in its peripheral region, incompatible

Image of the Historic Walled City with Golden Temple

landuse structure, shortage of housing, over crowding, dilapidated buildings, slums and blighted areas. Inadequacies in the circulation system compound the problem further.

The new developments have mostly taken place in northern part of the G.T. road. It has spread in form of ribbon and radial type of development. The growth is mainly unplanned and irregular. (Refer Map 2.2)

2.4.1 MASTER PLAN

The state government of Punjab enacted **"The Punjab Regional and Town Planning and Development Act – 1995** (Punjab Act No. 11 of 1995) for the physical growth management of cities and for the equitable regional development. Draft Master Plan -2021 has been prepared for the city.

The municipal corporation of Amritsar is governed by the Punjab Municipal Corporation Act 1976.The total area of the Municipal Corporation Amritsar is 139.58 sq. km, out of which 105.86 sq. km is developed and 33.72 sq. km is undeveloped. The intersection of highway and railway, divides the city into almost two parts. In the Northern side of city, there are little possibilities of expansion. The city is expanding in north-western and eastern side. More urban expansion is possible towards the southeast and southwest of the city.

2.4.2 EXISTING LANDUSE PATTERN

The landuse pattern of the city over the years is shown in the table below:

Table 2-1: Landuse Pattern of Amritsar 1971 - 2001

AREA IN ACRES (in %)

S. NO.	LANDUSE	2001	1991	1987	1971
1	Residential	9042.67 (43.99)	6602.30(48.43)	4472.18 (46.67)	3235.00 (42.30)
2	Commercial	622.44 (3.03)	513.76 (3.77)	485.77 (5.07)	173.00 (2.26)
3	Industrial	1356.03 (6.60)	1222.65 (8.97)	1098.01 (11.46)	758.00 (9.91)
4	Transportation	2363.79 (11.50)	1785.81(13.10)	1077.95 (11.25)	1028.00 (13.44)
5	Public/Semi-Public	1384.19 (6.73)	1192.31 (8.75)	1117.55 (11.66)	1209.00 (15.81)
6	Recreational	151.90 (0.74)	151.90 (1.11)	151.99 (1.59)	155.00 (2.03)
7	Govt. Land	5634.07 (27.41)	2164.70 (15.88)	1179.99 (12.31)	1090.00 (14.25)
	TOTAL	**20555.09** (100)	**13633.43** (100)	**9583.44** (100)	**7648.00** (100)

Source: ITPI Journal

Since 1971, the area of the city has increased almost 3 times now. The important features in the landuse pattern are stated below: (Refer Map 2.3)

Residential Land use: It includes housing of different types; detached, semi-detached and row houses, group housing, katras and bastis. The nature of city is dominantly residential which is near about 44% of the total area. The development in the city is taking place in the northern and eastern direction with planned and unplanned nature of colonies like S.G. enclave, New Amritsar etc. Area under residential use has increased drastically, from 3235 acres in 1971 to

9043 acres in 2001, indicating the extent of the sprawl of the city. The percentage distribution of residential area is 43.99 % in 2001, which is within the standards, which ranges from 40 % to 45 %. A serious challenge in the city is the rapid growth of slums squatter and settlements. Area under slums covers 33%. There are 63 slums, which covers 14% (1309 acres) of the total residential area (44%) of the city. Mainly these slums are near the medium industry in south and south-east side of the city

Commercial Landuse: Amritsar is one of the major trade center in the region which is very efficiently connected by rail and road with the state capital Chandigarh and other parts of the country. This has made Amritsar as an important collection and distribution centre of Punjab. The concentration of commercial activity is in the walled city along the main bazaar i.e. Hall bazaar. Therefore being a thickly populated area, it is having a problem of parking and informal activities. Other commercial activities are spread across the city. The commercial area also developing along the major transport links like Wagha border and the Rajasansi International airport. Some residential area is also being converted into commercial area, which is becoming a problem in the city. Under this the Albert road, Lawarance road and Dusundha Singh Road are declared as a commercial road. Commercial land use has increased almost three times in last two decades i.e. 173 acres to 514 acres, depicting importance of Amritsar as a trade centre .Commercial use has fluctuated from 2 % to 5 % and reduced to 3 % in 2001.

Industrial Landuse: The growth of industries shows a steady progress over the years. Industrial land use is almost two times the commercial landuse in the city. The percentage distribution of land under industries is 6.60 %. Industries have developed in Amritsar city primarily along Amritsar-Attari road, Focal point Mehtar road, Batala road, Amritsar Jalandhar road, Amritsar Taran Taran road, Khemkaran road and Taran Taran railway line. Remaining industries are functioning from residential areas as non-conforming uses.

Road Network and Transportation: The road network of Amritsar is primarily radial with all the regional roads leading out. The arterial road in Amritsar constitution above 60% of primary road network. The National highway - 1 divided the city into two parts, which are linked by small hierarchy roads at frequent distance. Land under transportation landuse is 11.50 % in 2001, which is much below adequate standards of 15-20 percent.

Public and Semi Public: Areas allotted to public semi public use have shown reduction in percentage distribution. It was 1209 acres (15.81 %) in 1971 and 1384 acres (6.73 %) in 2001. The reason could be attributed to increase in other land uses in comparison to public semi public use.

Recreation and Open space: Recreational areas constitute just 2 % of the total landuse till 1987 but has reduced to 1 % in subsequent years. This is far below the norms set up by the UDPFI Guidelines. Most of it has been encroached by unauthorized developments.

Government Ownership land: It is notable that land under Government ownership is about 27 % (2001). These include areas under the Army Cantonment, International Airport, various historical and archeological monuments, Govind Garh Fort etc.

Proposals of the draft Master Plan 2021 is presented in Map 2.4.

2.5 DEMOGRAPHIC PATTERN

2.5.1 POPULATION GROWTH

Punjab is one of the rapidly urbanising states of the country. The urban population in the state in 2001 was around 34 % compared to that of national average of 26% as per census 2001 and it is expected to grow by about 50 % by 2025. Amritsar and Ludhiana are the two leading urban centres. The 2001 Census of India reported the population of the city of Amritsar to be 10.11 lakh, giving it metropolitan status. Historically the city has been growing at a slow pace due to variety of reasons. Relatively higher rate of growth during 1971-81 is due to inclusion of certain areas in to the municipal corporation in 1976. The people of Punjab are more entrepreneurial and have always been exploring opportunities world over. The city has witnessed high rate of international migration mostly to countries like Canada, USA, UK, Singapore etc., The disturbances the city experienced, also negatively affected the growth prospectus. However, during 1991 to 2001, the rate of growth has been high and its significance gets accentuated due to the fact that all of this growth experienced during the last six years of decade 90s. The pull factor of urban areas and the push factor led by rural prosperity appear to bring people of rural Punjab to urban areas. The growth is mainly in the tertiary sector.

Figure 2.3: Population in Amritsar MCA 1901-2001

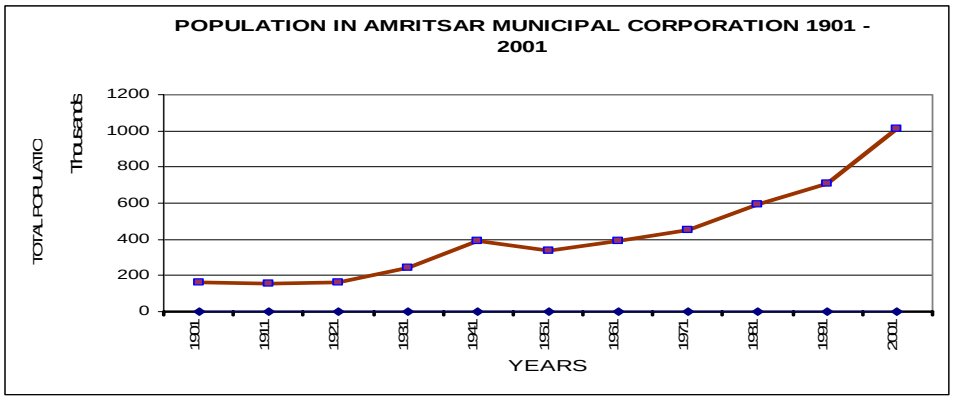


Table 2-2: Decadal Growth of Population in Amritsar 1881 - 2001

YEAR	TOTAL POPULATION	DECADAL VARIATION IN %
1881	1,51,896	11.84
1891	1,36,766	-10.87
1901	1,62,429	18.77
1911	1,52,756	-05.96
1921	1,60,218	04.88
1931	2,44,840	65.30
1941	3,91,211	47.64
1951	3,36,114	-14.04
1961	3,90,055	16.05
1971	4,54,805	16.66
1981	5,94,844	30.79
1991	7,08,835	19.16
2001	10,11,327	42.67

Source: MCA

2.5.2 POPULATION DENSITY

The city has a high concentrated central core with sparsely populated peripheral areas. The sprawl of the city is haphazard due to unplanned areas, leading to the problems of congestion and chaos in the old core. The southern part of G.T. road i.e. the Walled city and its surroundings have high density of population and houses. The core area becomes chaotic during festivals and religious events as number of pilgrims visit the Golden Temple. (Refer Map 2.5)

2.6 ECONOMIC BASE

2.6.1 INTRODUCTION

As stated earlier, Amritsar is mainly a trade and religious tourism centre. It is also among the 20 focal point industrial estates as identified by State Government of Punjab. Historically, the city has been part of international trade routes like the ancient silk route from China to Europe. With the improvements in the bilateral ties with Pakistan, the city may re-emerge as a 'gateway to west' and prominent trade hub of the Northern India.

Post-independence, Punjab has made considerable economic progress despite the setback it suffered in 1947. It contributes nearly two third of the total production of food grains of the country. The state is also ranked third in the total milk production in the country. It is the leading producer of wheat at a total production of 2 million tonnes per annum. The initiative of Green revolution (a major agricultural initiative) has been keenly taken forward by the people of Punjab. Amritsar, being very important city of Punjab has with its strategic location, has potentials to have vibrant and sustainable economic activities encompassing all the sectors such as agriculture, live stock production, industries and trade.

2.6.2 WORK FORCE PARTICIPATION

In the period of 1971-2001, the number of total workers has increased almost three times from 1,22,038 to 3,22,214. The work participation rate according to Census of India 2001 is 34.33 %. Around 89 % of the people are engaged in the secondary and tertiary sector/ service sector.

FIG. 2.4 DISTRIBUTION OF WORKERS IN 2001

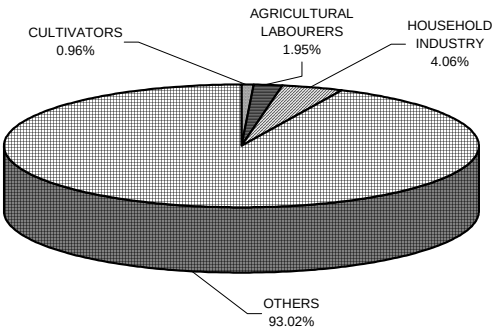


Table 2-3: Work force distribution in Amritsar

Occupation Category	Type of Workers	No. of workers	% to Total Workers
Status of working population	Total Workers	322214	--
	Total Main Workers	301827	93.67
	Total Marginal Workers	20387	6.33

Occupation Category	Type of Workers	No. of workers	% to Total Workers
	Total Non Workers	678322	--
Primary Sector	Main Worker – Cultivators	2900	0.90
	Main Worker - Agricultural labourers	5897	1.83
	Marginal Worker - Cultivators	283	0.09
	Marginal Worker - Agricultural labourers	1466	0.45
House-hold manufacturing	Main Worker - Household Industries	12260	3.80
	Marginal Worker - Household Industries	1992	0.62
Others	Main Worker – Others	280770	87.14
	Marginal Worker – Others	16646	5.17

Source: Census of India, 2001

According to study conducted by the "Economic Intelligence Service, Centre for monitoring Indian Economic Private Limited" the following percentage distribution of major activities has emerged for Amritsar and its surroundings urban areas:

Table 2-4: Distribution of employment in major economic sector in and around Amritsar

In %

S. No.	Major Towns	Primary Activity	Industrial Activity	Services Activity
1	Amritsar (MC)	9	32	59
2	Tarn Taran (MC)	16	18	66
3	Patti (MC)	36	9	55

Source: Profile of Districts, EIS, CMIE, Oct 2000

It can be observed that activities related to service / tertiary sector pre-dominate in Amritsar and also in the surrounding urban centers.

2.6.3 TRADE AND COMMERCE

Trading sector absorbs 59% of the workforce. The major commodities for trade include various silk products; woolens mainly in demand are pashmina and reffal shawls, Phulkari - traditional embroidery, blankets, carpet, copper, brass utensils, dry fruit and tea. The important retail and wholesale business centres in Amritsar are Talhi Sahib Bazaar, Katra, Jamailsingh, Majith Mandi, Hall bazaar, Shastri market and Kathain bazaar etc.

Apart from textile manufacturing, Amritsar is also one of the biggest grain markets in Punjab. The important items include wheat, maize, gram, rice and gur. The city is also famous for rich cuisine and milk products.

An open textile market

2.6.4 INDUSTRIES

The main industries of the city are wool, cotton and textile mills as well as dairy and light engineering works. Farming is a major employer in the region producing crops including cotton, barley, oilseed, pulses, potatoes, rice, sugarcane, wheat and tobacco.

Amritsar has witnessed several historical events leading to change in the character of the city over the years. Since, independence, the industrial sector has also seen many fluctuations in its growth. It is observed that number of industries located on the periphery of the city do not conform to pollution control standards. It is a matter of concern that number of small industries are shutting down. About 200 units have been already closed down leaving more than 8000 workers jobless in industries on Batala road. It is estimated that another 175 units may also close down due to the import of cloth from Surat and Ahmedabad.

Table 2-5: Type of industries and products

Industry	Product	Items
Large scale Industry	Textile	▪ Woolen – carpet, shawl, blankets ▪ Silk – daryai, handkerchiefs, turban, lungies, ▪ Ghagras, sarees, dupattas ▪ Cotton – khaddar, bed sheets, bukram ▪ Georgette ▪ Taffeta
Small scale Industry	Machine tools	▪ Agriculture implements ▪ Cycle and cycle parts ▪ Nut and bolt ▪ Printing machine ▪ Sewing machine and parts ▪ Electric motors ▪ Electric fans ▪ Glass beads ▪ Cotton ginning ▪ Automobile parts ▪ Radio & amplifiers
	Food products	▪ Milk plant at Verka ▪ Warian ▪ Papad ▪ Jam and Murabba ▪ Gur and Khandsari
	Chemicals	▪ Paints and pigments ▪ Dyes and colors ▪ Soap manufacturing ▪ Oil and perfume

Industry	Product	Items
	Others	▪ Plastic goods ▪ Rubber goods ▪ Musical instrument ▪ Shoes and leather ▪ Gems and Jewels ▪ Rope making ▪ Hosiery industry ▪ Laces ▪ Thermometer making ▪ Building materials ▪ Furniture and Wood works ▪ Metal industries - brass, copper and iron ▪ Foundries ▪ Distillery

2.6.5 HERITAGE RESOURCES

The city of Amritsar has developed around the most sacred religious place for the Sikhs, namely the Golden Temple. The 12 gates in the city wall are the entry point to a rich heritage zone comprising of katras, courtyard houses, bustling bazaars. The importance of the holy city Amritsar is due to the presence of the Golden temple and Akal Takhat, one of the five Takhats of Sikh religion. Over 10 to 15 million tourists, from all over the world visit Amritsar every year during Baisakhi, Diwali, Sangrand Amasya, all the important days related with the life of the ten Sikh Gurus and that of Shri Guru Granth Sahib. Daily visitors to the city of Amritsar are estimated to be about 70,000 mostly from within the state. Other places of interest includes: Jallianwala Bagh, Wagha Border, Durgiana Temple, Gurudwara Baba Attal, Gurudwara Baba Deep Singh, Ram Tirth Temple etc. There are 70 national and international flights arrive and depart from Amritsar every week and the visits of NRIs and foreign tourists vary between 500 to 5000 per week.

2.6.6 OTHER AMENITIES

The city has one major university (Guru Nanak Dev University), one medical college, two dental colleges, 10 higher educational establishments and around 200 schools. The city also boasts 15 hospitals, 26 clinics, 9 public libraries and 2 stadiums.

2.7 POPULATION FORECAST

For the purpose of forecast, three separate analyses have been used in this report i.e. geometric increase (GI), incremental increase (II), and arithmetic increase (AI) methodologies. It is observed that the geometric increase projection represents the most likely future population growth scenario and hence adopted for further estimation of requirements.

Table 2-6: Population Trends

Year	Projection of Population		
	GI	II	AI
1951	326000	326000	326000
1961	376000	376000	376000
1971	408000	408000	408000
1981	595000	595000	595000

Year	Projection of Population		
	GI	II	AI
1991	709000	709000	709000
2001	967000	967000	967000
2005	1043926	1032840	1018280
2010	1148746	1126840	1082380
2015	1264090	1233840	1146480
2020	1391016	1353840	1210580
2025	1530687	1486840	1274680

2.8 ISSUES

Unregulated growth, urban sprawl, increasing landuse conversions with in the old city putting pressure on the overburdened infrastructure are major areas of concern. While the inflow of visitors has risen, the facilities available within the city are limited. Declining industrial activities is also a major concern. The economic potential of the city as a trade and logistic hub, as an international tourist centre need to be exploited.

CHAPTER - 3: HERITAGE AND TOURISM RESOURCES

3.1 INTRODUCTION

Like several other medieval settlements, Amritsar is also a fortified city. The city wall is punctuated by 12 gates connecting one another and also the core of the city where the Golden Temple sits in a commanding position surrounded by the sacred tank and the circumambulation path. Between the city wall and the Golden Temple is the densely built urban fabric characterized by narrow lanes, katras, houses with courtyards and bustling bazaars. This form of urbanity is typical of the period with several other cities displaying similar characteristics. The problems of internalized growth and densification of the inner city of Amritsar are experienced in many other contemporary cities also. The challenge today, for most of the medieval Indian cities, is to address the paradoxical situation of development and conservation of the unique urban heritage. The planning and development strategy has to be structured in a sensitive mode.

Aerial view of Golden Temple, Amritsar

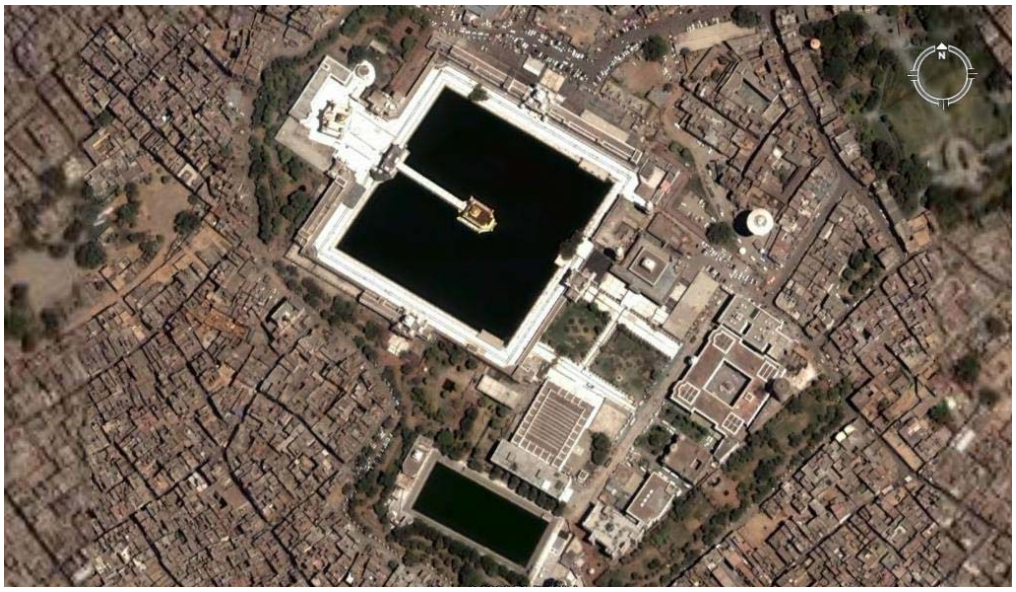
Urban renewal calls for decongestion requiring decentralization of industrial and wholesale activities to outer areas. Detailed investigation of basic infrastructure needed to identify status of roads, water supply lines, sewerage systems, electrification, etc. This historic city can be transformed into a beautiful heritage town by careful planning and sensitive renewal. Although it is difficult to cite examples from the Indian context, several medieval European cities have accomplished this very well, particularly after the World War II.

The uniqueness of the heritage of Amritsar extends much beyond its architecture and other manifest objects. It is integral to the manner in which people associate with this city and the spiritual ambience it generates. Efforts to conserve the heritage of the city must address the built as well as the spiritual environment. This goes back to the natural presence of the sacred

tank around which the idea of settlement was initiated by Guru Ramdas in 1577 AD. In its existence of more than 400 years, the city has become a major source of inspiration and dedication, particularly in the minds of the Sikhs across the world.

3.2 GOLDEN TEMPLE – THE SPIRITUAL CORE

The city of Amritsar and the Golden Temple are synonymous. The very mention of the word Amritsar conjures up the image of the Golden Temple. It is therefore inevitable that all heritage conservation efforts must begin with this central temple complex. The Golden Temple and its precinct are looked after by the temple management authority, the major problems of heritage conservation and management extend outside this complex. The planning efforts for this unique heritage must consider the core issue.



The Temple Complex is surrounded by densely built urban fabric which is very rich in buildings of various kinds. It is therefore necessary to look at the entire historic fabric for conservation.

Almost levitating above and in the middle of an expansive water-body, the 'Pool of Nectar', Harmandir Sahib (Lord's Temple) as it is called, stirs one deeply with glitters of its golden dome, kiosks, parapets, repousse work, and the enchanting evanescence of it's shimmering reflection in the pool. With the temple and tank as the focus a complex of buildings, most of which repeat in their architectural details the characteristics of the central structure, have come up in the vicinity, in the course of time.

The Golden temple has four entrances and is approached by means of a causeway, which connects the entrance gateway, *darshani deorhi*, with the main shrine. The causeway is a marble paved access bordered by latticed balustrades and lamp-posts with elegant copper gilded lanterns at close intervals, and meets the *parkarma* or circumambulatory. The outer *parkarma* or promenade of the Holy Tank had a string of *bungas*, once rooms or halting places built by *misals*, the Sikh confederacies, for lodging their people during the visits to the shrine. Some of the bungas have now been demolished to widen the parkarma.

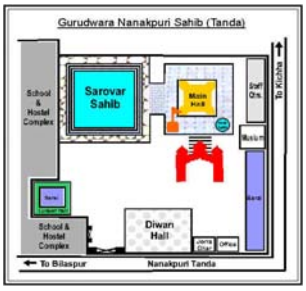
3.3 RICH SIKH ARCHITECTURE

Although one can observe several stylistic influences on the architecture of Amritsar, it can still be recognised for the distinct quality that has emerged from these eclectic expressions. Apart from buildings of religious order, Sikh architecture has secular types of forts, palaces, *bungas* (residential places), colleges, etc. The religious structure is the *gurdwara (Guru is the Master and dwara means Gateway)*, a place where the Guru dwells. A gurdwara is not only the all-important building of the Faith, as *masjid* or mosque of the Islamic faith and *mandir* or temple of the Hindu religion, but it is also, like its Islamic and Hindu counterparts, the keynote of Sikh architecture.

3.4 THE WORSHIP PLACE

Worship area within Gurdwara

Sikh temples are by and large commemorative buildings connected with the Ten Gurus in some way, or with places and events of historical significance. These religious buildings are associated with some important events in the lives of the Gurus. According to the Sikh faith, while prayers to God can be offered any time and at any place, a gurdwara is built particularly for congregational worship. The building could be as simple as a temporary shack, or a small room in a house, depending upon the resources of the local community. But the Sikhs would not stint in this matter, and they have thus built several beautiful and imposing gurdwaras some of which can accommodate hundreds of devotees. They are open to one and all without any distinction whatsoever.



A Gurdwara Layout Plan

3.4.1 THE SHAPES

Gurudwara have different geometric shapes like square, rectangular, octagonal, while they range from single storey to double storey. Gurdwara Shadian (martyrs') in Amritsar is a three-storied octagonal structure. Gurdwara Nanak Jhira in Bidar in Karnataka stands on a cruciform plan.

3.4.2 THE GUMBAD

The Gumbads

As a rule, a *gumbad* (dome) is the crowning feature of a gurdwara. Rarely, a shrine may be flat-roofed. Sometimes, a small single roomed shrine is topped by a *palaki*, a palanquin-like roof, derived from Bengal style of architecture, a *palaki* instead of a dome as its crowning feature is also found in Gurudwara. The dome is usually white, and sometimes gilded, as in the Golden Temple at Amritsar, Darbar Sahib at Taran Tarn, and Sis Ganj in Delhi. Alternatively, in some cases, domes have been covered with brass, while in others; at least the finial has been given copper-gilt sheathing. Based on Mount Kailasa it shoots up in the form of a cylindrical construction, of ten with some concentric discs, spheroids, culminating in a small canopy with pendants hanging at the outer rim.

3.4.3 THE MATERIAL

Jaratkari or in-lay work, *gach* or plaster-of-Paris work, *tukri* work, fresco painting, *pinjra* or lattice work are the techniques used for embellishment of exterior surfaces as well as for interior decoration.

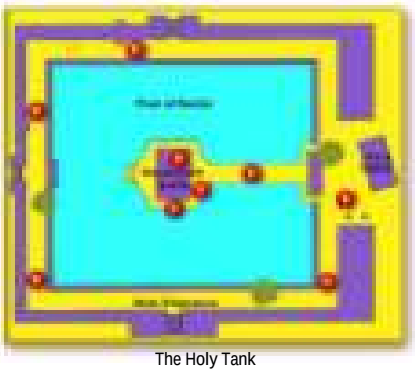
Excellent examples of this work can be seen in the Golden Temple at Amritsar. The largest numbers of such frescoes have been painted on the first floor of Baba Atal at Amritsar. *Pinjras* or delicate stone grilles are used for screens, enclosures and parapets.


Minarets around Golden Temple

Brick, lime mortar as well as lime or gypsum plaster, and lime concrete have been the most favoured building materials, although stone, such as red stone and white marble, has also been used in a number of shrines.

3.4.4 THE SACRED WATER

The temple and holy water tank as the focus of a complex of buildings and most of which repeat in their architectural details the characteristics of the central structure.


The Holy Tank

3.4.5 BLEND OF ARCHITECTURE

Sikh Architecture may be said to be blend of Rajput and Indo-Ceramic architecture. As a style, Sikh architecture is essentially universal in nature, which is an appropriate expression of the eclectic content of the Sikh faith itself. Onion-shaped domes, multi-foil arches, paired pilasters, in-lay work, frescoes, etc. are of Mughal extraction, more specially of Shah Jahan's period, while oriel windows, bracket supported eaves at the string-course, *chattris*, richly ornamented friezes, etc., are derived from elements of Rajput architecture such as is seen in Jaipur, Jodhpur, Bikaner and other places in Rajasthan. It shares its essence with imported monotheism and its lush exuberance with indigenous polytheism. Not only has Sikh architecture thrived at this but also flourished to the extent of working out its own stylistic idiosyncrasies.


Typical Sikh Architecture

3.4.6 THE FLOATING STYLE

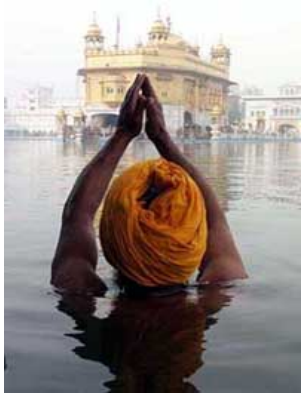
The fountains, canals, waterways etc. bring impression of movement. Such element was common in Mughal gardens to give character of continuity and use of water as an element of design has been frequently exploited in Mughal and Hindu architecture, but nowhere in so lively a manner as in Sikh architecture. Water becomes a sine qua non of Sikh architectural design, as in the Golden Temple at Amritsar or Darbar Sahib at Tarn Taran, and not merely an appendage to the main shrine.

It encompasses the polychromic, polymorphic and polycreative dimension of the world of relativity and transforms them into the colourless, formless, uncreated self-existence of the ever-abiding Absolute. All this is powerfully expressed in a form of urban design, which is an important dimension of Sikh architecture.

3.5 OTHER HERITAGE SITES

Few of the buildings and heritage sites, which need to be conserved or taken care of, are discussed below:

- ***Sri Hari Mandir Sahib Complex***



The Holy water

The Golden Temple is an example of the forms which Hindu temple architecture assumed in the nineteenth century. According to the official list of buildings of interest, published by the Punjab Government in 1875, the design of the temple, as reconstructed by Ranjit Singh, was borrowed from the shrine of Saint Mian Mir, near Lahore. The architectural prototype of the Golden Temple came into being as an idea combining the dharamshala and the tank envisaged by Guru Arjan, the son and successor of Guru Ram Das. Instead of building the temple on a high plinth in the Hindu style, Guru Arjan had it built in a depression so that worshippers had to go down the steps in order to enter it. Also it had four entrances, symbolic of the new faith, which made no distinction between the four Hindu castes. The interior of the Shish Mahal is ornamented with small pieces of mirror, of various sizes and shapes, skilfully inlaid in the ceiling, and walls richly embellished with designs, mostly floral in character.

Within Golden Temple

This complex experiences intense pressure from urban development in the surrounding areas. The basic issues relate to inadequate urban regulation, visual clutter caused by hoardings and billboards, chaotic traffic and parking, poor waste management and inadequate facilities for visitors. Further, development projects need coordination between the various organizations responsible for planning, developing and managing the city. Since the State Department of Archaeology Act or the Central ASI Act does not protect the complex, despite its immense cultural value, urban development around the site remains unregulated.

- ***Gandhi Gate***

Popularly known as Hall Gate, it is the entrance to the shopping hub of Amritsar - Hall Bazaar. A typical maharaja type gate with a clock and a Glow sign which reads "Amritsar - Sifti Da Ghar". (Refer Map No.3.1)

- ***Ram Bagh Garden***

The first heritage site is the Ram Bagh Garden in Amritsar with its Royal Places and Gates, Gardens, watch towers and "Baran Dari" with a beautiful layout of fountains and lawns having rare trees planted by Maharaja Ranjit Singh. The Garden is spread over 84 acres of land. It is appreciable that the Punjab Government has declared the Ram Bagh Garden and its buildings as protected monuments.

- ***Gobindgarh Fort***

That second heritage site is the Gobindgarh Fort of Maharaja Ranjit Singh and named after Sri Guru Gobind Singh. The fort was occupied by the British Army in 1846 and it remains under the Army control since then without any regular maintenance and conservation. One could see the crumbling main gate and side-walls with lot of unwanted Peepal and Banyan trees on the main building. It has underground escape outlets and inlets with fortifications. This fort was mainly used as a treasury of the Sarkar-e-Khalsa and is the only Sikh fort with the longest history.

- ***Ram Tirath temple***

On the outskirts of Amritsar is this significant historic birthplace of Lav and Kush. It is the spot where sage Valmiki's ashram stood and this is a sacred place for the Hindus where we get a glimpse of statues illustrating scenes from the Ramayana. The place gets a special mention in the great Hindu epic "Ramayana". It was here that Sita came after Rama deserted her. It was here that the great saint Maharishi Valmiki gave her shelter and protection. Mata Sita gave birth to twins "Luv" and "Kush" the great sons of Lord Rama. Maharishi Valmiki conducted them to highest levels in education in the realms of religious and social life besides intricacies of warfare.

- ***Maharaja Ranjit Singh Museum***

An attempt to conservation and preservation of the cultural heritage of the city of Amritsar is the Maharaja Ranjit Singh museum. Maharaja Ranjit Singh museum in the Company Bagh is a treasure house of the history, art and architecture of the Sikhs of the 18th and the 19th century. Formerly the summer residence of Maharaja Ranjit Singh, a famous Sikh king of the 19th century the palace now has been converted into the museum. Maharaja Ranjit Singh as his summer resi-dence built it in 1818 and he stayed here till 1837. The building was in Arabic style. The main collection includes Paintings, Arms and Armours, Manuscripts, and Coins.

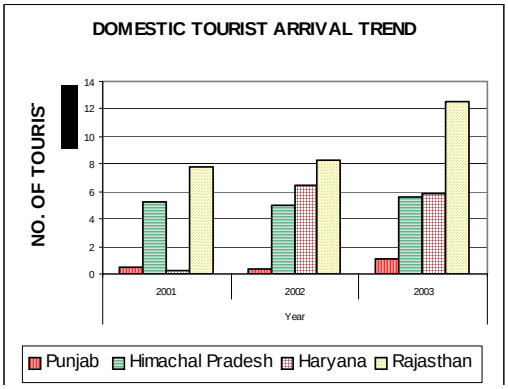
A few of the other heritage sites are listed below.

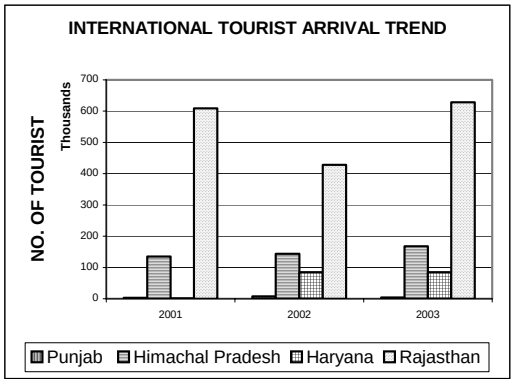
- Khalsa College
- 12 Gates of the walled city
- Jallianwalla Bagh
- A few Havelies within the walled city
- Akharas
- General Sham Singh fort and haveli at Attari village near Wagha Border

In the city, many old areas around Guru Ka Mahal, Katras may be conserved and declared as heritage zone. Such actions will facilitate to retain the original architectural style and character of the city. It is observed that many buildings in the walled city are either crumbling within passage of time or due to poor maintenance. The expansion of commercial activities with walled city has also caused to large-scale structural change. Haveillis, forts and other palaces are almost at verge of extinction, which are a serious threat to tourism and cultural resources of the city and need immediate action for their conservation.

3.6 TOURISM IN PUNJAB

Punjab, despite the fact that it has been on a major movement route through the history, cannot boast of major tourist activity. However, the last decade has seen a spurt of several visitors to the state. This includes a large number of people visiting the state for business, agricultural activities and pilgrimage. There are not many destinations which could compare with Rajasthan, Kerala or even Himachal Pradesh. Partly this can be attributed to the absence of adequate promotional activities and partly to the lack of proper tourism infrastructure. This calls for a comprehensive tourism promotion policy and action for the state by identifying potentials that exist in Punjab.





Comparison between four states shows extremely low number of tourists to the State, both considering both, domestic and international visitors

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On basis of analysis of tourists' arrival trend in India and in its northern states, it is observed that tourists flow in year 2003 in the state of Punjab is lowest (0.07 %) in comparison to its neighbouring sates i.e. Rajasthan (9.36 %), Himachal Pradesh (2.50 %) and Haryana (1.27%) (Refer Annexure 3.1)

3.7 TOURISM IN AMRITSAR

The Amritsar that greets visitors today is a bustling, busy city with a distinct 'frontier' atmosphere. Amritsar, as the name suggests, is rightfully a pool of nectar. Located in the state of Punjab, Amritsar is one of the most important pilgrimage centers especially for the Sikhs in the country. The city is characterized by some of the must visit religious, historical as well as contemporary sites of importance. The Golden Temple, where Sikhs from all over the world come to pay their reverence to Guru Granth Sahib and take a dip in the Amrit Saras Kund (Pool of Immortality) for spiritual purification is the major landmark of the place. The hard working and warm-hearted character of the people of Amritsar is conducive to the idea of hospitality which is very important for tourism promotion.

3.7.1 PLACES OF TOURISTS INTERESTS WITHIN THE CITY

Golden Temple

The Golden Temple is the genesis of Amritsar with the city growing around it nurtured by its divine sanctity, and is the most sacred Sikh religious sites in India. As one descends into the

temple (unlike most temples, here one actually descends as the structure is built below the level of the surrounding area), one is confronted by the stunningly beautiful sanctum sanctorum glimmering in the water of the holy tank that is flanked on all four sides by spotlessly clean marble walkways and pavements.


The Golden Temple - Harmandir Sahib

The main structure rises from the center of the sacred pool and is approached by a long causeway. The 52-meter, square-based Hari Mandir stands on a square platform, its lower parts marble, and its upper portion fully covered with plates of gilded gold. In the interior, on the ground, the Guru Granth Sahib (holy book of the Sikhs) is placed under a jewel-studded canopy. On the first floor is a small pavilion called the Shish Mahal (mirror room). It is ornamented with pieces of mirrors inlaid in the ceiling and walls. Above is another smaller pavilion. Exquisite murals adorn the walls of the pavilions, but other than that, the emphasis is on simplicity.

Situated at the other end of the causeway connected to the Harmandir Sahib is the Akal Takht. Literally, it means the eternal throne and its building opposite the temple has a significance. While the temple stands for the spiritual guidance, the Akal Takht symbolizes the dispensing of justice and temporal activities. During the day, the Guru Granth Sahib is kept in the temple and at night at the Akal Takht. Traditionally all Sikh warriors sought blessings here before going for war. There are several other Gurdwaras, around the Golden Temple, that trace their links with the Gurus. Gurdwara Baba Atal Sahib and the Gurudwara Shaida are important religious centers, each with its own history.

Jallianwala Bagh

Amritsar played a pivotal role in India's quest for independence, and no national monument has more significance than Jallianwala Bagh, a solemn, grim reminder of one of the bloodiest chapters of India's freedom movement. The 2000 Indians killed and wounded here in the indiscriminate firing by the British General Dyer on Baisakhi in 1919 was carnage that had nationwide ramifications, shaking and enraging the whole country. Jallianwala Bagh commemorates the martyrs, keeping the tragic episode in its historical context. Today, one finds a small gallery with photos of key personalities involved, the well into which the crowds jumped to escape the murderous hail of bullets and a simple memorial at the site that shaped India's destiny.


The Monument in Jallianwala Bagh

- ***Mata Mandir temple***

A grand old pious lady developed this Hindu temple situated at Rani ka Bagh, on the lines of holy shrine of Mata Vaishno Devi at Katra (Jammu), the temple draws crowds of devotees from far and near. Festivals are celebrated with great pomp and show.

Other places of Tourists Interest

- Durgiana Temple
- Summer Palace of Maharaja Ranjit Singh and Ram Bagh
- Khalsa College & Guru Nanak Dev University
- Gurudwara Baba Deep Singh (Gurudwara Shaheeda)

3.7.2 TOURIST PLACES AROUND AMRITSAR

Other Religious and Historical Gurudwaras

Within an hour's drive from Amritsar are several Sikh religious sites to visit. Several historical Gurudwaras at Baba Bakala, Goindwal Sahib, Khandoor Sahib, Tarn Taran, and Dera Baba Nanak, attract the devout. The drive takes one through the heart of rural Punjab with lush green paddy fields, tiny villages, and robust farmers.

Wagah Border

This is the famous international border between India and Pakistan. The pomp and pageantry of the Beating Retreat and the Change of Guard within handshaking distance of the Indian and Pakistani border security forces makes for a most charming spectacle. Soldiers from both countries march in perfect drill, going through the steps of bringing down their respective national flags. As the sun goes down, nationalistic fervour rises and lights are switched on marking the end of the day amidst thunderous applause.

Wagah Border

Ram Tirath

Around 16 km west of Amritsar on Choganwan road is Ram Tirath commemorating Maharishi Balmik's hermitage. A big fair now recognized nationally and lasting for four days is held here since times immemorial on every Kartika Puranmashi (full moon night in November)


Ram Tirath

Harike Wetland

The lake formed at the point of confluence of rivers Beas and Sutlej at Harike ford, situated mid way between Amritsar and Ferozpur was declared a national wildlife sanctuary in 1982

Baba Bakala

Situated about 35 km east of Amritsar. It has a magnificent Gurudwara where people gather in thousands on every amavas and an annual fair is held on Raksha bandhan day.

Dera Baba Jaimal Singh

About 44 km east of Amritsar is Dera Baba Jaimal Singh the Radhaswami, self – sufficient colony near Beas.

3.7.3 CULTURE & CRAFTS

Culture & Hospitality

The famous *Bhangra* dance

The culture of Amritsar (Punjab) has its own unique fragrance. It is unmatched. All communities hold pride in their traditions and the Punjabis whose open-mindedness has become proverbial also hold their unique tradition of hospitality high in their estimation as well as in their values of life.

Females a practicing *Tinya*

The land of Punjab (five rivers), which is described as the land of Gurus, Pirs and the warriors, as a matter of faith believes in earning honest living through hard labour and in sharing the fruits of this labour with others, without expecting any returns.

Hospitality binds people together in bonds of love; it increases circles of friendship and makes the atmosphere aglow with human warmth. Punjabis have proved this in all corners of the world in seemingly alien lands and because of these qualities they have been willingly accepted as useful, responsible citizens of the world, warm neighbours and good friends. When the British landed in Punjab as victors they were astonished to find that every little village and every mohalla in all cities of Punjab had special places to receive and honour guests, and that the people of this land were irrepressible extroverts. The District Gazetteers of the time bring forth Punjab's generous hospitality in bold relief.

Art and Craft

Punjabi Jutti traditional craft

Punjab has a distinguished tradition of art and craft, which its people have maintained in spite of the passage of time. For years, craftsmen in Punjab have been producing colourful papier-mache utensils, intricate needlework, wicker fans and windows, handmade leather juttis.

Chowk-Poorana*: The art of mud wall paintings*

Mud walls of the rural houses in Punjab are painted on festive occasions like Dushera, Karva chauth (the day when women observe a fast for the well being of their husbands), Holi, Diwali etc. Walls are plastered with mud and women draw ferns, plants and other fascinating motifs to invoke the blessings of Lakshmi, the goddess of wealth and plenty.

3.7.4 TOURIST CIRCUITS

Amritsar – Ram Tirath - Sarai Amanat Khan -Wagha Border – Amritsar

Ram Tirath takes visitors back to the times of Ramayana, at Sarai Amanat Khan tourists come down to a highway inn of the Mughul times, at Wagha Border tourists suddenly land into the present. The pageant of the beating of the retreat and the change of guard within handshaking distance of the Indian and Pakistani forces here makes the most charming of the spectacles as a daily evening drill.

Amritsar - Dera Baba Nanak -Qadian-Kala naur-Gurdaspur-Pathankot

At Dera Baba Nanak the first Prophet of Sikhism, Sri Guru Nanak Dev spent the last days of his life. At the historic Gurudwara built in his memory holy robes that were presented to him at Mecca are still preserved. Qadian is the home of the founder of the Ahmedyia Sect of the Muslims. At Kalanaur, Akbar-the-great was coroneted. Pathankot is India's link city to the State of Jammu and Kashmir and the best tourist destinations of Himachal Pradesh.

Amritsar-Tarn Taran-Hari-Ke-Pattan - Goindwal Sahib - Sultanpur Lodhi – Kapurthala (Kanjli lake) –Jalandhar

A majestic gurudwara with a golden dome and a large holy pool having healing powers is built at Tarn Taran in the memory of 5th Guru, Sri Guru Arjan Dev ji. Hari-Ke-Pattan is a wild life sanctuary of international fame. Goindwal Sahib was the seat of Sikhism during the lifetime of the 3rd Guru Sri Guru Amar Dass ji. It has a deep well with 84 steps. The faithful say that if visitors recite Jap Ji Sahib, a composition of the first Guru at each step after a bath they cross the cycle of 84,000 lives and attain moksh. At Sultanpur Lodhi Sri Guru Nanak Dev spent 12 years in the service of Nawab Daulat Khan Lodhi. It was from here in 1500 A.D. that he had begun his first holy travel towards the east and the south to preach the Word of God. Kapurthala is renowned for beautiful palaces and buildings. Kanjli Lake receives several species of migratory birds and is a fulfilling picnic spot.

Amritsar - Baba Bakala – Kartarpur - Jalandhar.

At Baba Bakala the 9th Guru Sri Guru Teg Bahadur Ji had revealed himself to Makhan Shah Lobana. The 5th Prophet of Sikhism founded Kartarpur. The authenticated, handwritten copy of Sri Guru Granth Sahib complied and edited by him and having his seal is located here. It is also famous for the manufacture quality world-furniture. Jalandhar is the oldest city of Punjab. Today it is internationally famous for the manufacture of sports goods and landmarks connected with the Hindu religion.

3.7.5 EXISTING TOURIST TREND IN AMRITSAR

As per the figures shown in tables (Refer Annex 3.1), there is a very small number of visitors to the state. However the visitors to Amritsar is extremely high i.e.70,000 per day, indicating that there is a very large number of Intra-State tourism, showing religious connections to the city. The endeavour should be to promote inter-state and international tourism in the state which will be to the city also. Similarly, the up-gradation of domestic Raja Sansi Airport into International Airport has also boosted

up the inflow of International Tourists including Punjabi NRI & foreigners. It is found that total number of air traffic has increase from 25000 per annum to 50,000 at Raja Sansi Airport at Amritsar.

3.7.6 AVAILABILITY OF TOURIST ACCOMMODATION IN AMRITSAR

Amritsar has various types tourism infrastructure including first class and economic hotels, transport facilities and guides to cater the needs of tourists. In Amritsar, category wise number of registered hotels and its rooms are shown below. (Refer Annex 3.2)

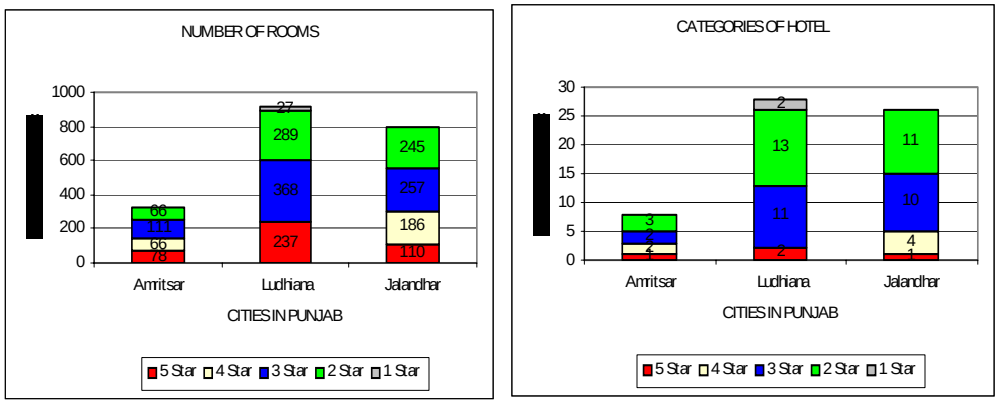


Figure 7.1 Numbers of Rooms and Category of Hotel

3.7.7 ACCESSIBILITY AND CONNECTIVITY

The state of Punjab has a well-connected air, rail and road network. Being a transit node Amritsar provides accessibility to all other important destinations Shimla, Haridwar, Dehradun, Manali, Katra etc.

International Airport -Amritsar

Amritsar has an international airport located in Rajasansi, which is about 11 kilometers from the main city. Outside the airport, car rental facility is available for tourists and travellers. This airport is also well connected with other domestic airports at Chandigarh, Ludhiana, Pathankot. Amritsar has various train facilities running daily from Delhi and provides connectivity to other important destinations as well.

It is preferable to travel short distances by road as Amritsar is well connected to Chandigarh capital city and the rest of the areas of Punjab.

3.8 ISSUES

- The old city with its compact organisation is a case for urban renewal and conservation.
- Most of the heritage buildings/ structures in the Walled city are in dilapidated condition
- Protection and maintenance of these monuments are very poor. Most of the owners are unaware of the significance of the building and do not get any support from concerned agency/ organization.

- Absence of any proper recording and certification of old structures of historical importance.
- New developments in the surrounding of the heritage structures, portraying lack of urban aesthetics.
- Lack of fund for the maintenance and up-keep of heritage buildings.
- Needs for the international convention centres and multipurpose cultural centres.
- Development of urban craft villages, tourist development programme and Urban Haat.

CHAPTER - 4: ENVIRONMENTAL SERVICES

4.1 INTRODUCTION

United Nations Millennium Development Goals (MUG) for water supply and sanitation aim to reduce by half the proportion of the population without access to "safe and sustainable" water supply and sanitation by 2015. In the 10th Five Year Plan, the target set was to achieve 100% access to safe drinking water for all urban and rural population and 75% coverage with sewerage and sanitation facilities in urban areas, all by 2007, which is still to be achieved. In addition, there is an undertaking to improve the water quality in major polluted rivers nationally.

The Municipal Corporation of Amritsar (MCA) is responsible for urban services in the city, including water supply, sewerage and solid waste services over an area of 11,495 ha. In year 2004 “The Shri Guru Ramdas Integrated Development Plan” was prepared to cover the city with 100% with water supply and sewerage facilities along with construction of treatment plants. The need of the project was acknowledged by the Prime Minister on his visit to Amritsar in September 2004. In 1991 the city had a developed area of 8,380 ha, or approximately 73% developed. This chapter describes the physical extent and location of the urban water and Waste water services in and around the city as they were at the time of the Study field trip in March/April 2006. The descriptions are based on data from MCA and other details supplied by stakeholders, together with observations, surveys and questionnaires instigated by the Study team of JBIC.

4.2 WATER SUPPLY SYSTEM

Water Quality: Water abstracted via the MCA tube wells is of a good chemical quality and is fit for human consumption. All parameters comply with Desirable Limits under Indian Standards. Hardness (measured as alkalinity) is the only parameter exceeding desirable limits, but lies well below the Maximum Allowable Limit. Disinfection is practiced through the dosing of bleaching powder solution. MCA are currently conducting a pilot study into the possible use of ionization as a form of disinfection. While this may solve the problem of operational reliability, ionization provides no residual to protect against subsequent contamination. Bacteriological tests are occasionally carried out by MCA but few records are available. Where contamination is found, MCA increases the rate of bleaching powder dosing to compensate even though there is likely to have been a delay of several days.

Ground Water quality: Records of groundwater quality are not readily available. The few data for Amritsar provided by MCA reflect the similarities in composition of dissolved solids over a wide area of the very extensive alluvial aquifer system. Selected data are shown in Table 4.1.

Table 4-1: Groundwater Quality

Parameter	Source of Data			
	Amritsar CGWB 20051	MCA Ave2	Range of Concentrations 3	Indian Standards19914
TDS	675	406.4	340-450	500
Ca	62	59.2	31-72	
Mg	20	28.7	24-37	30

Parameter	Source of Data			
	Amritsar CGWB 20051	MCA Ave2	Range of Concentrations 3	Indian Standards19914
Na	36	n/ a		
K	12	n/a		
HCO3 5	320	n/a		3005
CI	28	29.4	20-33	250
S04	40	n/a		200
F	0.06	0.15	0.1-0.25	1.0
N03	13	n/ a		45

Surface water quality: The only available data from upstream of the city, as identified to date, are samples from the Beas and Ravi rivers that were published in 2000. These are reproduced in the following table:

Table 4-2: River Water Quality

Parameter (mg/litre unless stated)	Beas River	Ravi River
Temperature (degrees C)	16	14
pH	7.8	7.8
Conductivity (microsiemens/cm)	342	202
Total N	1.4	0.4
DO	7.8	9
BOD.	4.2	0.4
COD.	14.4	1.6
Chloride	23	10
Sulphate	16	8
Sodium	14.6	1.8
Faecal Coliforms (MPN/ 100ml)	500	0
Turbidity (NTU)	24	7
Total Coliforms (MPN/ 100ml)	5,000	7
TDS	302	194

Water production: The water supply system operated by the MCA comprises a total of 260 tube wells, pumping water directly to distribution mains on an intermittent basis. The only form of treatment is disinfection by the addition of bleaching powder at a limited number of the wells. The distribution system includes 30 OHSRs, although some of these are currently not in use on a regular basis. The system is old and poorly maintained, with the result that estimated water losses are very high.

No water production meters have been installed and the only available data are the records of pump hours run, as maintained by the tube well drivers. Large wells are said to have a capacity between 20,000 and 25,000 gallons per hour and small wells have a capacity between 8,000 and 10,000 gallons per hour. Similarly, there are no flow meters installed and estimates have to be made on the basis of pump hours run and local operators' knowledge of the installed capacity.

Water consumption: Water metering is limited to a few domestic connections and the commercial, institutional and industrial connections. Only 45% of the meters are currently

working. MCA provided up to date details of consumption over the previous 3-month period. No records are kept of the volume of water delivered by the tanker service.

Rising Mains: It is understood that from pump, rising mains were originally intended to deliver water directly to nearby OHSRs. Over time it has become common practice to connect distribution pipes directly to the mains and to pump straight to supply.

OHSRs: A total of 30 OHSRs have been constructed having a combined storage capacity in the order of 24 million litres, which is equivalent to approximately 3 hours storage at the current water production rate. Most reservoirs have an elevation of approximately 33m, are circular, and constructed of reinforced concrete. MCA staff has reported that little water actually reaches any of the OHSRs due to the limited pressure in the rising mains resulting from the low head, pumps and the direct offtakes to distribution. 11 of the OHSRs are understood to be in working condition and the remaining 19 are not operable due to leakage problems. However, MCA are currently conducting remedial works to seven reservoirs (leaking inlet/outlet pipe work, rusted handrails etc.) and this work is steadily progressing.

Over Head water Reservoir

Distribution system: The water distribution system can be considered as being a collection of discrete, small diameter, pipe networks centered on the tube wells and OHSRs with only a basic level of interconnection. Each network is characterized by high water pressure near the tube wells, which results in frequent pipe bursts, and steep hydraulic gradients such that the water pressure is less than 0.1 bar within 300m of the source. There is understood to be some connection between some of the networks although the extent is not clear. The majority of the water distribution system is over 30 years old and comprises a total of approximately 950km of pipelines with materials including cast iron, asbestos cement, ductile iron, polyvinyl chloride (PVC) and galvanized iron. Some sections of the system, particularly in the vicinity of the old walled city, are over 50 years old according to local residents. There are no complete records of the distribution system pipelines, only a city-level drawing showing the larger pipes, and MCA are dependent on the collective memories of their staff for system operation and maintenance.

It is estimated that **80% of the total population of Amritsar has access to potable drinking water supply and that 51 of the 60 city wards are served.** The remaining 9 wards are reported as having "partial water supply" meaning that the area of coverage is limited.

Coverage and Customer service connections: The 2001 census indicates that at that time there were 179,057 households and that the city population was approximately 967,000. This equates to 5.4 persons per household. However, discussions the results of the household survey, it can be estimated that in the old city there are approximately two households per water connection and in the rest of Amritsar approximately 5% of households share a connection. On this basis it is calculated that in 2001 there was an average of 6.2 persons per water connection. Based on the stated number of 114,643 domestic connections and adopting the year 2001 persons per connection figure, it can be calculated that 707,287 people currently

receive water via the MCA system. This is equivalent to 68% of the estimated 2005 population of 1,043,926.

In addition to domestic connections, it is estimated that 2.61 mld is supplied via the 747 public standposts and 0.08 mld by the tanker service. On the assumption that each person consume 30 litres/day it can be calculated that an additional 89,750 people are served. It is debatable as to whether water from public standpipes constitutes a reasonable level of service, as collecting the water is both a time consuming and strenuous activity. However, adding this population to that served by the domestic connections gives a total of 797,037 or 76% of the 2005 population.

MCA report that the current numbers of service connections are as follows.

Table 4-3: Service Connections

Type	No. of Connections
Domestic	114643
Commercial/Institutional	10817
Industrial	929
Total	126389

Many of the connections utilize galvanized iron pipelines, particularly in the old walled city where pipes have been laid above ground due to the lack of available space. Only 40 domestic connections have flow meters. Water bills are calculated in accordance with the land area of the property as per the government tariff notification (Table 4-4 and Table 4-5). Though all the commercial, institutional and industrial connections have to meters, as per notification. It was reported by JBIC study although only 45% are actually working.

Table 4-4: Un-Metered Water Supply Tariffs

Plot Size	Rate for Water per connection per month(in Rs)				
	Financial Year				
	2003-04	2004-05	2005-06	2006-07	2007-08
Upto 5 marla (125 sqmt)	50	55	60	70	100
Above 5 marla but less than 10 (125 – 250 sqmt)	75	80	90	100	105
Above 10 marla but less than 1 kanal (250 – 500 sqmt)	100	110	120	130	140
1 kanal and above (500 sqmt or more)	Metered Supplies only				

Table 4-5: Metered Water Supply Tariffs

Plot Size	Rate for Water per cubic metre (in Rs)				
	Financial Year				
	2003-04	2004-05	2005-06	2006-07	2007-08
Metered water connections (domestic)	2	2.6	3.2	3.5	3.8
Metered water connections (commercial and industrial)	4	5.2	6.4	7	7.6

The supply system includes 747 public standposts that are un-metered and provide water to the public free of charge. There are no attendants in place and many of the standposts are in a poor condition with pipes being left running during times of system operation. MCA operate 13 tractor-pulled water tanks, each having a capacity in the order of 3,000 litres. Again water is delivered free of charge. The public standposts are a significant source of water to the poor

people of Amritsar, although their use is clearly limited to the extent of the MCA distribution system.

Private tube wells: Due to the limited coverage and inadequacies of the MCA water supply system, both within the existing supply zone and in the newly developing areas around the periphery of the city, many households, commercial/ institutional organizations and industries have installed their own private motorized tube wells. Estimates indicate that there are approximately 8,850 private household and commercial/ institutional tube wells and in the order of 2,200 private industrial tube wells. These are typically up to 50m in depth, and MCA make a nominal charge (Rs. 160 per quarter) for this service.

The two largest users of groundwater through private wells are Khanna Paper Mills (approximately 10 mld and located outside the MCA boundary) and the Cantonment area (defence offices and accommodation) (approximately 9 mld and located inside the MCA boundary). Other large users include Indian Railways, the Guru Nanak Dev University, the bus terminal, Khalsa College, hospitals, schools and hotels located throughout the city and the numerous wool and textile factories.

Hand pumps: Not all sections of society can afford motorized tube wells and hence the poorer sections of the community have, through individual or cooperative action, installed hand pumps either within their own properties or in common locations. There are no records of the number or locations of handpumps installed, but they can be found throughout the city and probably number in the order of 70,000. Many people, especially in the poorer developments such as Indira Basti near the old walled city and Sultanwind and Fatehpur to the south of Amritsar are totally reliant on this form of supply. Handpumps are only in the order of 20m deep and unfortunately many have either dried up due to the falling groundwater table or become contaminated due to their close proximity to the poor quality sewerage systems.

Hand pump with multi-users

Water losses: An assessment of the current level of physical (real) water losses is not a straightforward exercise as there is a lack of data regarding key issues such as asset (tube well and pipeline) condition and locations, actual pumped flows and true water consumption. However a broad estimate can be made as described below.

Water Balance: As noted above there are virtually no domestic meters, only 45 % of the commercial, institutional and industrial connection meters are working and public standposts are not metered at all. As a result an assessment of the consumption by category, and indeed an overall assessment of the MCA supply system water balance is a difficult process.

The key difficulty is to determine what volumes of the 164 mld of domestic connection consumption and losses belongs to which category. India design norms make an allowance of 135 lpcd for domestic supply. Surveys and calculations suggest that this level of demand has not been reached in Amritsar and that present consumption is more likely to be in the region of 85 lpcd. On this basis the total domestic consumption for the 114,643 customers is 60 mld.

At this stage it can be concluded that the per capita consumption is probably in the region of 85 lpcd and that losses are in the order of 61 %. However, it is also clear that there is a low level of

understanding of the need to save water and an under-appreciation of its economic value. Water related public education campaigns are clearly essential and should be taken up by the MCA as a matter of urgency.

It is estimated that non-revenue water is in the order of 63% of production. The estimate that almost 80% of physical losses occur at service connections is based on region-wide experience which identifies poor quality connections to distribution systems as being the main cause of leakage. This experience ties in with the general views of both PWSSB and MCA.

Real losses refers to water that is permanently lost to the distribution system through either breaks in the pipe network or overflows at service reservoirs. Apparent losses refers to water that seems to have been lost, but in reality has not been, and which can be recovered through appropriate action. The key apparent losses are meter inaccuracies, which can be corrected through meter maintenance or replacement, and unauthorized consumption. The latter item is water that is taken from the MCA system through illegal connections. This can be reduced by the identification of such connections followed by either their removal or their legalization. Based on MCA's estimate that there are currently 10,000 illegal connections, each serving an average of 6.2 persons having a consumption of 85 Lpcd.

Public satisfaction: Evidence from the property surveys, transect surveys and NGO meetings strongly indicate that the public are dissatisfied with the level of service received. The majority of complaints concern the low system pressure, the water quality and the intermittent nature of the supply rather than the actual quantity of water delivered. It does seem however, that many of the population have resigned themselves to low levels of water supply and have changed their habits accordingly.

The chief public complaints are low pressure and poor quality. The wealthy install their own booster pumps. The wealthy install their own tube wells and industries generally have their own tube wells. The intermittent nature of the water supply dominates the lives of the poor. Water is chemically fit for consumption but there are reports of bacterial contamination the public have a fundamental distrust of the quality of water provided.

4.3 WASTE WATER MANAGEMENT SYSTEM

Domestic Waste water System Coverage: The MCA operates and maintains the public underground piped sewerage system. The system is comprised of some 59km of large diameter (above 400mm) sewers and around 499km of small diameter lateral sewers (below 400mm). Lateral sewers are generally constructed from glazed stoneware pipes and larger trunk sewers over 400mm diameter from cast in-situ reinforced concrete.

The sewerage system in the city is divided into three catchments, North zone, South zone and Chhehartta. The North zone includes most of the city north of the main railway line and conveys sewerage to a pumping station at Mahlan. This represents around 32% of the Waste water collected in the city. The South zone includes most of the city to the south of the railway line and conveys sewerage to a pumping station at Fatehpur. This is the largest catchment and represents around 63% of the Waste water collected in the city. The remaining catchment at Chhehartta lies to the west of the city and conveys sewerage to a pumping station at

Gumanpura. This is the smallest catchment and represents just 5% of the Waste water collected. The system currently has just under 100,000 connections, arranged as follows:

Table 4-6: Sewerage House Connections

	Total
Domestic	94,928
Commercial	2,169
Industrial	2,436
Total	99,533

Assuming 6.2 people per household (as used in water supply calculations) and the stated figure of 94,928 domestic connections, it can be estimated that 588,554 people are served. This represents 56% of the estimated 2005 population (1,043,926).

Private systems exist inside many of the major housing complexes (private and government properties such as University, prison, and military establishments) serving in the region of 60,000 people, bringing the total number of people on piped sewerage to approximately **650,000, representing 62% of the population.**

Un-sewered Areas: The un-sewered areas are primarily located around the outer fringes of the city, newly or relatively newly, constructed developments centred on existing village communities such as Sultanwind to the south or Vallah to the east. The new developments are characterised by a high proportion of plots marked out and constructed to foundation level only, with low present occupation levels. The existing villages at the core are, however, densely populated and largely un-skewered, resulting in the accumulation of foul sewage in pools in low-lying areas around the community. Little attempt seems to have been made by the residents to solve what appears to be a long-standing, but nevertheless local, problem.

Sewage Treatment: There is currently no sewage treatment operating on the domestic sewerage system. There are however twenty pumping stations on the system. Eleven of these are termed Temporary Sewage Disposal Sites by the MCA, and pump sewage directly into an adjacent watercourse, mostly the towns storm water drains or nallahs. The remaining nine pumping stations pump sewage on to another manhole further down the system.


Outfall of industrial Waste water in Ganda Nallah

These pump stations have mainly been constructed in the last 15 years as a means of solving sewerage overflow problems. Eight of them have been retro-fitted over the existing sewer and use a manhole, or even the sewer pipeline itself, as a sump or wet well. This inevitably results in inefficient pump operation as pumps draw air into the pump chamber causing cavitations on the impeller. The other twelve are purpose-built, submersible pump, pumping stations that tend to operate much more conventionally.

All pump stations are manually operated with most stations working on 3 shifts a day, operating pumps to pre-determined time patterns. Pump records show pumps working up to 20 hours per day at one site, others for as little as 2 hours per day. Most operate for between 10 to 16 hours a day.

Most pump stations are fitted with manually raked screens. Many are malfunctioning or defective. Screenings removed from the flow are left in piles close to the pump station. Screenings typically include significant quantities of plastic and some building debris.

Industrial Waste water Sewerage and Treatment

All industries are required to install treatment plant to treat their effluent before discharge, whether to the sewer or to a watercourse. The common parameters and general standards required of industries are given in Table below with the treatment process being according to the Indian norms (defined in "Comprehensive Guidelines on Pollution Control Clearance for Industrial Plants" produced by the Pollution Control Board (PCB)). The PCB licenses, and subsequently monitors, all industrial discharges.

Table 4-7: Typical Waste water Effluent

Parameter	Standard for discharge to:		
	Inland Surface Water	Public Sewer	On Land for Irrigation
Suspended Solids (mg/ 1)	100	600	200
Dissolved Solids (inorganic) (mg/1)	2100	2100	2100
pH value	5.5to9.0	5.5to9.0	5.5to9.0
Temperature (oC)	40	45	45
Total Chlorine (mg/ l)	1.0	-	-
Ammoniacal Nitrogen (as N) (mg/ 1)	50	50	-
BOD (5 days) (mg/1)	30	350	100
COD (mg/ 1)	250	-	-

Notes: 1) Standards taken from Punjab Pollution Control Board, Comprehensive Guidelines on Pollution Control Clearance for Industrial Plants.

2) Other standards are stipulated in the Guidelines. Only the more common parameters are listed here.

3) Many industries have guideline parameters specific to the technology employed. This table lists only those that are applicable to a typical industrial plant.

Poorly maintain Ganda Nallah

4.4 STORM WATER DRAINAGE

The city is crossed by a network of open storm water drains or nallahs, which generally flow from east to west following the natural shallow gradient in the topography. The locations of the two main nallahs - the Ganda Nallah to the south of the city and the Tung Dhab to the north. These nallahs eventually discharge into one large drain to the west of the city, known as the Hudiara Drain, which itself flows into the river Ravi over the international border in Pakistan. The rate of flow is generally slow at this time of year, due to the low flows and the low bed gradient.

Drain chocked with solid waste near Hindustani Basti

The nallahs provide an extensive network for surface water drainage which generally run at a slow gradient from east to west across the city eventually discharging into the Amritsar city drain, which itself discharges into the Hudiara Drain which flows across the border into Pakistan approximately 30km from Amritsar. All the nallahs are heavily polluted throughout the city, not just with grey' water but also with foul sewage and domestic refuse. All run in close proximity to housing, and some of the poorest communities have actually colonised the banks of the nallahs. The nallahs cause a significant eyesore and pose a substantial health risk to the adjacent communities.

The level of pollution in the worst stretches of the nallahs (strong, black, odorous and biologically "dead") indicates that high levels of foul sewerage are being discharged direct, suggesting that many parts of the piped sewer system are inoperative or ineffective. The situation is exacerbated by the MCA activity of pumping from the sewerage network into the nallahs at times of heavy hydraulic load on the system - on average two or three times a day - from the 20 temporary and permanent pumping stations (termed temporary disposal sites) around the city. Thus the already heavy pollution is made even worse.

4.5 SOLIDWASTE MANAGEMENT

Overall Implementation Management: The overall management of the service is the responsibility of the Medical Officer of Health of the MCA, operating as a cell within the Municipal Corporation of Amritsar. At a local level there are 235 Mohalla Sudhar Committees (MSCs) (like a local development committee) within the city, representing specific localities. These committees are set up and run by local people only. Under a set of guidelines, the committees take up the responsibility of house-to-house collection of solid waste by engaging and supervising a limited number of safai sevaks (sanitary workers). Payment for the engaged safai sevak(s) is 50% made by MCA and the remaining 50% by the Mohalla Sudhar Committee, who in turn collect it from local public.

Human Resources: The service is managed by the Medical Officer of Health, assisted by the Assistant Medical Officer of Health. There are more than two thousand four hundred sanitary workers in Amritsar (1443 engaged by MCA and 967 through Mohalla Sudhar Committees), 51 drivers, 24 Sanitary Inspectors, 20 Sanitary Zamadaars (head of sanitary workers), 7 Naib Darogas (a post to supervise functioning of sanitary zarnadaars and sanitary workers) and 4 Chief Sanitary Inspectors).

Generation of Solid Waste

Amritsar generates significant quantities of solid waste. The major sources of generation of waste are:

- Local residents,
- Commercial areas and vegetable markets,
- Households,
- Industries
- Hotels and restaurants,

An unattended litterbin

- Hospital and dispensaries,
- Domestic and stray animals,
- Floating population (tourists and travellers, migrant workers, traders, hawkers from nearby areas) etc.

It is estimated that about 450 Metric Tonnes (MT) of solid waste is generated every day within the administrative jurisdiction of the Municipal Corporation. Considering an estimated present population of 1,065,000 and **a daily floating population of around 70,000** at an estimated per capita generation of solid waste of 400 grams per day for the Local inhabitants and 300 grams per day for the visitors, the total estimated solid waste generation works out to about 447 MT.

The major wastes produced from households, shops and commercial establishments are composed of food and other discarded waste materials such as paper, plastic, glass, metal, rags, packaging materials. The estimated composition of typical municipal solid waste (according to sanitary officials of MCA with no scientific supporting data) is as presented in Table 3.6.

Table 4-8: Composition of Municipal Solid Waste in Amritsar

Composition/ type	% of the Total Wastes
Bio-degradable kitchen waste	50-55[1]
Paper	5
Plastic	1
Metal	Not significant
Glass	1
Woody waste (twigs, bark, furniture waste.)	5
Building waste (bricks, cement, demolition waste etc.)	25-30
Industrial waste (from household industries within MCA limits)	8-10
TOTAL	100%

Source: MCA

Notes:

1 Kitchen waste typically has a moisture content of between 40% and 50% storage of waste at source

In Amritsar, households inside the walled city, as well as the better developed colonies, are beginning to store waste at source. However, storage practice is not very common in the poorer areas of the city (colonies like Sultanwind, Fatehpur etc.), in the slums along the railway lines, and near the bus stands, railways, market places, tourist places etc. Systematic collection of solid waste is practically non-existent in these areas.

In the comparatively developed areas of the city it has been indicated that people use different storage equipment to facilitate the primary collection of wastes. Typically buckets, plastic bins, plastic bags and metal bins with or without lids are used for the purpose.

Segregation of Waste at Source: Most households and commercial establishments do not seriously practice segregation of waste at source, but rely on itinerant scavengers to achieve the same effect. In most parts of the city, people try and salvage re-saleable material from waste such as newspaper, glass bottles, empty tins, plastic bags, old clothes, etc. This mixed but recyclable waste is picked up by poor rag-pickers, as their livelihood, mainly from the

household dustbins or after the house-to-house collection. At times they even empty the dustbins and spread the contents in the street to help them with sorting.

In the process of disposal, and later segregation and collection, the quality of the recyclable material deteriorates as it gets soiled by wet waste that often contains contaminated and hazardous waste.

Primary Collection of Waste: There appears to be a well-practiced arrangement for house-to-house collection of waste in some parts of the city; in the walled city and in the new planned areas. However it is not so common in a number of the slums and in areas inhabited by the poor (especially the 26 "villages", which have been included within MCA boundaries like Sultanwind, Doburji etc.) where no specific arrangements for house-to-house solid waste collection exist. The usual house-to-house collection arrangements are effected by around 250 Rikshaw Rehris, a tricycle having back space as a storage bin. The principal reasons for using Rikshaw Rehris is that they are cheap to operate, readily available and easy to manoeuvre in the narrow lanes. In areas without house-to-house collection, community bins are strategically placed for direct use by the householder. In many places, the area around the community bins is untidy and poorly maintained, mainly due to the inconsiderate behaviour of many members of the public who use this facility carelessly. In most of the poorer localities, the rubbish is dumped in open spaces, such as by the roadside, by the railways and in the nallahs. Overall, more than 75% of solid waste reaches community bins through sanitary workers (Safai-sevaks) engaged by Mohalla Sudhar Committees.


Litters unattended

Temporary Storage of Waste: MCA have placed about 125 metallic dustbins of 4.5 cu. m size and 10 bins of 10.0 cu. m. size for the temporary storage of waste collected by the sanitary workers as well as for the citizens to deposit their domestic waste. In some areas, there is inadequacy of such bins especially in market places. In many areas due to access considerations, the open sites are sometimes used as dumping sites, where waste is just dumped not only by individuals but sometimes even by the local sanitary worker.

In some instances, the sites for bins are not paved, giving rise to unhygienic conditions around the bin. During windy conditions, a substantial amount of waste (mainly plastic, paper etc.) can be blown away.

Transportation of Waste: For Transportation of waste from the city, MCA uses 56 tractor-trailers, 7 mini trucks (about 4-5 ton capacity) and 3 large size (about 10 ton capacity) trucks. These vehicles are used for the primary collection of waste from the community bins and its onward transport to the designated landfill site. The additional equipment (7 Front-end Loaders) are also used for loading waste into trailers. This is done by lifting the storage bins and emptying them into the tractor trailer for transportation.


Garbage disposal trucks with modern facility

Treatment and/or Disposal of Waste: MCA does not carry out any pre-treatment of the waste except direct dumping of waste at the disposal site. The details of land-fill sites for solid waste disposal are given in Table 4.7 There are 8 sanitary workers to manage the landfill site located outside Bhagatawala gate. They work in one shift of 8 hours and they assist in tipping the solid waste from the vehicles at an appropriate location and then spread the solid waste to avoid large heaps etc.

Table 4-9: Location of City Landfill Sites

Name	Size (ha)	Location	Distance (km) from city centre	Age (years)	Present status
Land fill site no. 1	8.1	Outside gate Bhagatawala	2 km	25 years	Could be used for next 15 years
Land fill site no. 2	5.8	Fatahpur	6 km	Recently acquired	Under development
Others	2.65	Bharaiwal	5 km	Recently acquired	Under development

Status of Hospital Waste Management: There are about 167 Health Care Centres (Hospitals, Dispensaries etc.) in the city. The MCA has identified Medicare Incinerators Private Limited, Ludhiana and Health Care Systems, Jhabal Road, Amritsar as the agencies for hospital waste management. These agencies enter into a private agreement with the individual Health Care Centre for hospital waste management. However, details on their collection, mode of disposal (size of incinerator etc.) could not be ascertained. The major role of MCA is regulatory only.

Health and Hygiene Education: Annually MCA conducts about 3-4 seminars in schools on hygiene education. In addition the respective area Sanitary Inspector conducts monthly or bi-monthly meetings on solid waste management with the Mohalla Sudhar Committees. However, these meetings are normally held as and when there are solid waste management issues faced by the community.

4.6 HEALTH INDICATORS

In the absence of the appropriate records, it has not been possible to obtain any meaningful information from the Amritsar Municipal authority. Enquiries have also been made repeatedly through the District Health Officer and the Civil Surgeon but only District-wide data for the rates of Infant and Maternal Mortality been made available. These show a high rate for both values and a clear increasing trend over the 2000-2004 period but are not specific to the city.

Data on both in-patients and outpatients have been gathered from two Amritsar Hospitals. The Guru Nanak Dev Hospital is the only one however which keeps any detailed records, although the accuracy of these data is uncertain. In discussions with medical staff it was understood that some 200,000 people visited the hospital for medicines (or treatment as shown below), and it appears that various types of intestinal disease and skin infections accounts for the bulk of the diseases recorded.

Table 4-10: Records from Guru Nanak Dev Hospital for 2005

Disease	Out-Patient	In-Patient	In-Patient Deaths
Typhoid Fever	3347	941	14
Amoebiasis	2548	120	0
Diarrhoea & Gastroenteritis	21,473	543	17
Intestinal Infections	17,421	739	82
Viral Hepatitis	2598	100	0
Malaria	1469	0	0
Infectious Parasitic Diseases	10,928	382	17
Infectious Skin Diseases	13,728	10	0
All Other Skin Diseases	15,356	32	0

4.7 WILLINGNESS TO PAY

A detailed survey was undertaken by JBIC to assess the access levels of infrastructure services in the slum areas. The key outputs from the survey are as follows:

- A majority of the respondents (84%) living in the Project area have in-house piped water supply connection from MCA
- About 12% of the respondents use their own groundwater source for meeting their domestic water needs
- About 32% are faced with water quality problems, 9% are faced with water quantity problem and 11% are faced with pressure (within the pipe) problems
- 48% are willing to pay up to Rs 50 per month for a wholesome water supply, 32% were willing to pay between 50 to 100 rupees per month and 20% were willing to pay more than 100 rupees per month
- 24% of respondents stated that there was incidence of water borne disease in their family during the last year

4.8 SUMMARY

In Amritsar, the establishment statistics suggest that access to the piped drinking water system is available to 80% of the population. It is also claimed that 70% of the population enjoy access to an underground sewerage system, all of which is discharged directly to nallahs (surface water drains) in and around the city. These untreated discharges have a severe, and detrimental, impact on the water quality in the watercourses. On this basis water supply and sewerage are both functioning significantly below the India target levels. Solid waste and Storm water Management is also poor. Urban poor are the worst affected.

In the light of this the initiative under JNNURM would be a significant contribution towards achieving the goal. The initiative for the Project was acknowledged by the Prime Minister on his visit to Amritsar in September 2004. The same is being developed with JBIC. The plan has been based on the Master Plan prepared by the Punjab Water Supply and Sewerage Board, MCA and JBIC.

CHAPTER - 5: TRAFFIC & TRANSPORTATION

5.1 INTRODUCTION

The road network of Amritsar is primarily radial with all the regional roads leading to core city. The G.T. Road forms the Central spine of the city. Most of the development in the city has taken place along these radial routes. The city does not have any distinct ring although the Circular Road does exist in the new parts of the city. The Amritsar-Delhi railway line that also is an international link with Pakistan is a major physical barrier for traffic movement within the city. The road network in the city can be distinguished into two parts: (1) the old city and (2) the later developments (civil lines).

The old city bounded by a wall and a circular road that runs along the wall both in the outside and inside. It has a road network characteristic to a typical medieval town of North India. Narrow winding streets characterize the road network, lanes and by-lanes laid out into introvert planning units. This part of the city is built to human scale with the major thoroughfares. And it tends to fail to the existing transit demands of multi-modal transport with majority of motorised vehicles.

The new city, which is across the railway line, comprises the Civil Lines, Model town, Industrial areas, and regional institutions like the University etc. Most of the recent developmental efforts in the city are spread in areas across the railway line. (Refer Map 5.1)

5.2 TRANSPORT SYSTEM

5.2.1 ROAD

Amritsar is well connected at regional level with the road network. NH -1 connects the city to Jallandhar through Beas towards the Eastern side and NH-15 links the region with Tarn Taran District towards Southern side. These two national highways connect the city to other nearby urban centres. The city also has a good linkage to Lahore, Pakistan through Wagha Border towards the west direction.

Amritsar District – Regional linkage

5.2.2 RAILWAY

The city of Amritsar is well connected by broad gauge rail network with other parts of country. It is also connected to the Wagha border and Pakistan. There are total three stations located within the municipal limits of Amritsar.

Railway track passing through city

5.2.3 AIRPORT

Amritsar is Punjab's interface to the world. Being a major religious destination and also an important link of the Non-Resident Indian (NRI) population to their native land, International linkages are very important for the city.

Raja Sansi Airport - Amritsar

The city has an international airport, which is located on Ajnala Road, 15 km from the Amritsar Railway Station, near Raja Sansi Village. The city is well connected to Delhi, Srinagar and Chandigarh by regular domestic flights. The international flights are mainly destined to Afghanistan, Birmingham, China, Singapore, Toronto etc. There are a total of 74 flights per week. There has been a tremendous increase in the number of passengers from 2004 onwards. The Government of India has decided to upgrade the airport at the cost of Rs. 79.26 cr. In the year 2008-09, the second terminal is expected to open.

5.3 TRANSPORTATION NETWORK

A view of the Road and traffic

The road network of the Amritsar City is radial-cum-circumferential covering an area of 139 sq. km. The total road length is about 525 km. The G.T. Road passes through the centre of the city connecting both ends of the National Highways bypass. The other important roads that connect to other parts of the city are mentioned below (Refer Map 5.1)

- Ram Tirath Road connecting the city with Chogawan;
- Airport Road connecting the city with Ajnala,
- Other major roads like Fatehgarh Churian road connecting to Fatehgarh Churian town, Majitha Road to Majitha town, Kashmir road leading towards Batala connects Batala, Gurdashpur, Pathankote and finally Jammu & Shrinagar.
- The G.T. Road connects Amritsar with the Wagha (Pakistan Border) on one end and to Jalandhar on the other end.
- The southern connection of the city viz. Tarn-Taran links the city to Ferozpur and parts of Rajasthan.

- Khem Karan Road connects the city with Khemkaran (Border)

5.3.1 CONDITION OF ROAD

Out of the total surfaced road length of 525 km, around 70 % is maintained by the MCA and other roads are maintained by other state government agencies. It has been depicted in the figure 5.1. The details of the length of road under MCA are presented in Table 5.1.

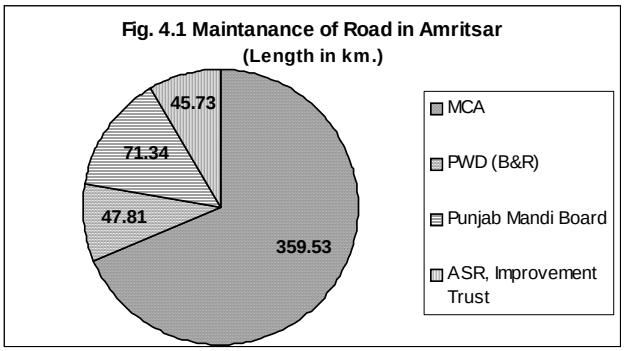


Table 5-1: Length of Roads in Amritsar under MCA

Year	Total Length	SURFACED				UN-SURFACED		
		Water Bond Macadam	Black Top	Cement Concrete	Total	Motorable	Non-Motorable	Total
2001	495.20	3.40	431.45	7.60	*442.45*	48.00	4.75	*52.75*
2004	524.41	1.40	451.66	7.60	*460.66*	50.00	2.75	*52.75*

Source: MCA

5.3.2 RIGHT - OF - WAY

Generally roads in Amritsar have a right-of-way (ROW) less than 30 m. These are mainly the sub-arterial roads of the city that distribute the traffic to the various areas in the city. The road network in the walled city accounts for most of the roads with carriageway less than 10 m. The concentration of such roads in the Central Business Area of the city, which attract a large amount of traffic, creates problems. The National Highway Bypass is the only road with a ROW above 60 metres. All other roads have cross-section varying between 30 m to 50 m, these are mainly regional roads that form different radials of the city.

5.3.3 STREET LIGHTS

Streetlights exist for about 87% of the road network in the city. But it is observed that a large number of roads, particularly roads with carriageways above 30 metres are poorly illuminated. The outer edges of the roads particularly the footpaths also do not have lights arrangements. Thus, it needs to be ensured that the entire road network in the city is properly illuminated for road safety and security.


Vehicle flow on Bhandari Bridge

5.3.4 VEHICLES ON ROAD

All the categories of vehicles, except the non-motorized rickshaw, have shown considerable increase in their numbers during the period between 1995-96 and 2000-01 (Refer Table 5.2). There is considerable growth in the number of 2-wheelers and 3-wheelers in the city since the

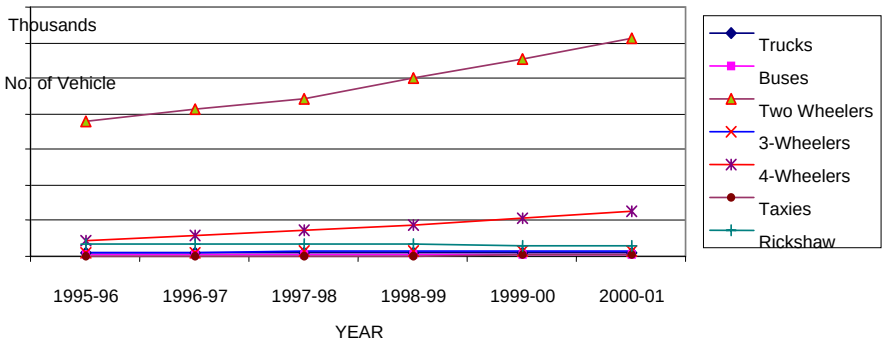
year 1995. Increasing vehicles is a concern for transportation related issues in the city. A notable feature is that over 15000 Rickshaws are operating in the old city. Improved conditions for NMV are necessary.

Table 5-2: Number of Registered Vehicles

Type of Vehicle	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
Heavy Vehicles						
Trucks	4979	4985	4993	4994	5006	5114
Buses	1556	1564	1591	1599	1619	1624
Light Vehicles						
Two Wheelers	189371	205568	221562	249658	277458	306891
3-Wheelers	5650	5998	6481	6958	7425	7945
4-Wheelers	22878	28657	36368	44248	52659	62685
Taxies	528	688	769	1158	1458	1958
Non-motorized Vehicles						
Rickshaw	16500	16913	16572	16520	15530	15716

Source: District Transport Office, Amritsar

FIG. 5.2 GROWTH OF VEHICLES IN AMRITSAR 1995- 2001



5.3.5 ROAD ACCIDENTS

The rapid growth of vehicles coupled with inadequate capacity of road and poor traffic management has resulted in number of accidents on roads.

Table 5-3: Accidents on Amritsar Roads

Type	Year					
	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
Total case reported	168	169	167	238	105	149
Fatal Accidents	81	78	65	98	71	78
Non-Fatal Accidents	87	91	102	140	34	71

Source: District Transport Office, Amritsar

5.3.6 PUBLIC MASS TRANSPORT

The city of Amritsar does not possess any public transport system for intra city operations. Earlier, Municipal Corporation used to run limited city bus services, which have been later discontinued. With a complete lack of public transport system, there is an increase in personalized modes of transport. Further number of three wheelers has increased which serve as mass transit system.

5.4 TRAFFIC CHARACTERISTICS

5.4.1 SPEED AND DELAY CHARACTERISTICS

The speed on various roads determines the level of service on the roads. It is observed that the speed in most parts of the city lie within the range of 30-40 kmph. The roads with relatively higher speeds are generally located in the newly developed areas. The roads with lower speeds (below 20 kmph) are within the walled city. The circular road has a mix of speeds ranging from less than 20 kmph in areas around the Hall Gate as well as with the city till the Golden Temple, whereas road stretches towards Khazana, Hakima and Bhagatanwala Gate have higher speeds upto 40 kmph.

On-street parking leads to congestion on Road

The major delays are observed at level crossings. As railway line divides the city in two parts, it tends to become a major impediment to the traffic flow in the city. Delay also occurs where there is a sudden change in the right-of-way and the carriageway width is narrow. Another cause of delays is the roadside encroachments.

5.4.2 PARKING CHARACTERISTICS

5.4.2.1 Off- Street Parking

The maximum accumulation of vehicles at off-street locations includes Hussainpura Parking Lot, Railway Stations, Bus Terminal, Market complex between Mahan Singh Chowk and Rambagh chowk, Hall Bazar, Town Hall Complex, Dharm Singh Market area, Lawrance Road, Punjab & Sind Bank on Lawrance Road and opposite Bus Stand Exit. It is observed that the demand for car parking is high at Hall Bazaar and stretch from the Town Hall to Golden Temple. The 2-Wheeler accumulation is high at the Railway Station, Bus Terminal and the Town Hall Complex. The demand for off-street parking of cycles is high at the Railway Station and Hall Bazaar. The parking accumulation of cycle-rickshaws is found to be high at the Railway station and at Hall Bazaar.

Off-street parking on Railway Road


On-street parking on Railway Road

5.4.2.2 On-street Parking

High on-street Parking is observed in all commercial areas particularly at Hall Bazaar, Court Road, Near Queens Road Chowk, Jallianwala Bagh – Golden Temple Gate, Ghee Mandi Road, Link Road, G. T. Road (Near Bhandhari Bridge), Local Streets (outer circular G. T. Road) etc.

Traffic of the city is of mixed type, consists of slow and fast moving vehicles. In addition, cycle and pedestrian traffic is also encountered on arterial and sub arterial roads. Due to inadequate width of carriageways and low speed vehicles, the carrying capacity of roads are low and resulting into traffic snarls.

5.5 ISSUES

Following issues emerge:


Mixed Vehicular Flow on Bhandhari Bridge

a) Modes of Transport

- Insufficient public transport system leads to high percentage of privately owned vehicles in the city;
- Mixed vehicular traffic flow on all roads network which slow down the overall traffic speed;
- Inadequate capacity of road in the city, especially in the old city

b) Road Network


Poor traffic management at a junction

- Physical conditions of more than 25% of road network of the city is in poor condition;
- Non availability of parking areas
- Walled city of Amritsar has very narrow roads widths;
- loading and unloading activities by heavy vehicles in the walled city area
- The outer Circular Road, Hall Gate, Putlighar-Lawence Road and the section of G. T. Road around the railway station are the most congested roads;
- Lack of road side amenities on highways i.e. NH-1 and NH-15;
- Absence of street furniture along the roads
- Absence of bye pass / ring road insouthern part of the city


Vehicles parked on road hampers traffic flow on Bandar Bridge

c) Intersections and junctions

- Unplanned intersections carrying high volume of traffic lead to traffic congestion during the peak hours. The rotaries at Hall Gate, Hussainpura Chowk, Court Road Chowk are most congested;
- Poor design of road junctions create problem in traffic flow include Mukam Singh Chowk, Ratan Singh Chowk, Court Road Chowk, Ajnala Road By-pass Chowk (Refer Map 4.3).

d) Vehicular Parking Facilities

- Absence of parking areas in the walled city;
- Mixed vehicular off-street parking;
- The vehicles are parked on-street in all commercial areas – Hall bazaar, Court Road, Queens Road, Jallianawala Bagh road, Link road, near Golden Temple gate, GT Road near Bandhari Bridge, Outer circle GT Road, other local streets. The on-street parking of mixed vehicles hurdles the smooth flow of traffic movement;
- Tremendous increase in vehicular population over the years and absence of defined parking places.

Commercial activities on Circular Road

e) Traffic Management System

- Lack of traffic signals on most of the major road intersections and junctions;
- The signal timings do not take in account the timing of pedestrian movement;
- Absence of adequate number of traffic police on major intersections and junctions;
- No proper signages on the road intersection and junctions;
- Lack of proper street lighting facilities on the roads;

f) Vehicular Air Pollution

- Out dated vehicles on roads are the main cause of high level of air pollution in the city;
- Poor quality of fuel used in vehicles leads to high emission of pollutants i.e. SPM, carbon etc

g) Rail Network

- Absence of railway over bridges at the different level crossings create traffic congestion;

CHAPTER - 6: HOUSING & SERVICES FOR URBAN POOR

6.1 INTRODUCTION

Poverty alleviation has been an important objective of development planning in Punjab. Bettering the quality of life of the urban poor is a prime goal of the plan under preparation by MCA. In this chapter, specific analysis of the conditions of urban poor is undertaken to assess the needs.

6.2 URBAN POOR

Unlike the rest of India, the incidence of poverty in the Punjab is historically higher in the urban areas than in the rural areas. The proportion of urban population living below the poverty line in Punjab in 1977-78 was 25.6%, and in 1883-84 was 21.0%, as compared to 13.1% and 10.9% respectively in the countryside[2] . Studies claim that in Punjab the urban-rural gap has widened over time. In the mid-sixties only one-third of the poor in Punjab lived in urban areas. But since the early nineties almost two-thirds of the poor in the state are urban dwellers[3] According to BPL survey in Amritsar a total of 16655 households 95200 people (9%) fall under BPL category.

Poor housing condition with narrow streets along with open drains on the edges

6.3 URBAN POOR HOUISNG

With economic growth the city has expanded in the last 30- 40 years and this has led to the development of new residential colonies, including slums, mainly on the outskirts of the walled city. Many colonies were initially established by migrant labour engaged in various commercial activities (loading, unloading, industrial labour, drivers, construction workers, unskilled workers etc.) on the outskirts of the city and therefore were mostly inhabited by the poorer sections of society. There were virtually no urban services in these areas, hence their designation as slums in accordance with the UN Habitat directive.

Kuccha approach to slum abadi

Slums in Amritsar are localities that are unplanned, rural habitations within the city limit, with limited municipal facilities such as sewerage or water supply and not always synonymous

[2] Government of India: 1993; Report of the Expert Group on Estimation of Proportion and Number of Urban Poor, Planning Commission, New Delhi.

[3] Sandhu, Ranvinder Singh & Singh, Gurvind: 2003; Poverty Eradication Programme in India: a Case Study of Amritsar City, GBER Volume 3 No. I pp 37-45

with poverty. However, Amritsar's poor[4], often along with lower-middle and middle class neighbours mostly live in localities that have officially been categorized as slums.

According to Punjab Slum Area (Improvement and Clearance) Act, 1961 an area can be declared as slum, under the following conditions:

- Where the competent Authority upon report from any of its officers or other information in the possession is satisfied in respect of an area that the buildings in the area a) are in any respect unfit for human habitation; or b) are by any reason of dilapidation, overcrowding, faulty arrangements and design of such buildings, narrowness or faulty arrangements of streets, lack of ventilation, light or sanitation facilities or any combination of these factors detrimental to safety, health or morals it may be, by notification in the official gazette, declared such a area to be a slum area.


Unhygienic Community Water Supply

- In determining, whether a building is unfit for human habitation for the purpose of this act, regard should be had to its conditions in respect of the following matters. That is to say: a) repairs, b) stability, c) freedom from damp; d) natural light and air, e) water supply, f) drainage and sanitary conveniences, g) facilities for storage, preparation and cooking of food and for the disposal of waste water and the building shall be deemed to be unfit as aforesaid if and only if it is so far defective in one or more of the said matters that it is reasonably not suitable for occupation in the conditions". (Punjab Govt., 1961: 2-3).

In Amritsar slums have been notified in four phases I) Gazette notification in 1982 of 19 localities (Sl. No. 1 to 19 in Appendix 8). 2). Notification in 1984 of 4 slums by Chhehartta which was then a town committee (Sl. No. 20 to 23); 3) Notification in 1986/87 of 34 slums by Municipal Corporation Council, Amritsar, (SI No. 24 to 54); 4) Notification in 1987 of the rest by the Commissioner, MCA. These were allotted under a program initiated during late Prime Minister Smt. Indira Gandhi's government to help the poor, in the early, eighties. Besides these slums and illegal colonies, there are about 29 villages on the outer fringes of the MCA boundary.

As Amritsar municipal boundary expanded, several villages (mouza or village estates) along with their core settlements and agricultural land became included into municipal limits. By virtue of the layout, density, narrowness of streets, poor drainage and sanitation

[4] Migrants from other states that come to labour in Punjab, amongst others the bhaiya log as they are called from Uttar Pradesh or land less rural artisans, such as the Ramgarhias, and unskilled farm labour from scheduled castes, the Mazbi Singh, the Ramgarhias the Mahar Singhs - generally the non-Jats, both recent migrants from rural areas of the Punjab, in the early 1980s and poor urban migrants from West Punjab during partition in 1947.

conditions, these core settlements have also been declared slums. The owners of several hectares of agricultural land, that is now classified urban, live in these "slums", certainly with no dearth of money. Also living next to them is a large number of landless labour and artisan families.

Private developments that grow haphazardly, in which the poor or the marginal manage to get a small piece of land and gradually build a home, have no provision for sewerage. The situation is similar in colonies where the state provided land to the poor - 4 marlas each. But while the more prosperous may eventually manage to divert MCA resources to themselves, because of knowledge or influence, the poor areas are mostly not in a position and continue to live in unhealthy conditions which are multiplied by the contamination of groundwater in the absence of sewerage and sanitation.

It is estimated that the average age in the slums is about 16 years and the total population of slums is about 360,000, which is about 36% of the population of the city. It further indicates that, on average, each slum has a population of around 5,600; a substantial community. Based on the details of 28 slums (for which population and area details were available), the average slum area is about 6.45 hectares. Based on this, the slums have a population density of about 876 persons /ha.

Table 6-1: Total Slum Population to the City Population

Year	City Population	Slum Population	% slum to city population
1981	5,89,299	32632	5.53
1991	7,08,835	123000	17.35
2001	10,11,327	307109	30.00

Source: A study done by Guru Nanak Dev University

6.3.1 PLOT SIZE

More than 50% of households live in below 18 m^2 of plots. The table given below indicates the general size of the plots that the Economical Weaker Society (EWS) occupy.

Table 6-2: Plot Size of EWS

Plot Category	Aangarh	Bangla Basti	Chungi Number 2
	Households (%)		
Below 18 m^2	57	54	61
18 – 22 m^2	39	44	39
22 – 27 m^2	3	2	-
27 m^2 & above	1	-	-

Source: A study done by Guru Nanak Dev University

6.3.2 OWNERSHIP STATUS

A mixed tenure status has been observed in the slum abadi of the city. Approx. 10-15% of the total households in these slum areas are lives in rental houses (Refer Table 6.3)

Table 6-3: Ownership Status

Plot Category	Aangarh	Bangla Basti	Chungi No. 2
	Households (%)		
Encroachment	42	1	73
Purchase from landowner	-	51	-
Purchase from slum lords	17	20	10
Purchase from relatives/friends/others	11	9	9
Inheritance	16	8	2
Rental	14	11	6

Source: A study done by Guru Nanak Dev University

6.3.3 HOUSING AFFORDABILITY

A majority of households live in plot sizes under 18 m^2 have expressed their ability to pay for plot sizes under 18 m^2 at an assumed rate of Rs 500/m^2 given their current level of income and expenditure.

Table 6-4: Purchase Price of dwelling units

Category	Aangarh	Bangla Basti	Chungi No. 2
	Households (%)		
Below Rs. 500 per m^2	71	76	97
Rs. 500 to 1000 per m^2	17	12	3
Above Rs. 1000 per m^2	12	12	-

Source: A study done by Guru Nanak Dev University

6.4 BASIC SERVICES: ACCESS AND NEEDS

Water supply has been provided to 61% of the slum areas, and sewerage to 52% of the areas. This compares very well with the water supply and sanitation situation in many parts of the city. 65% of the slum areas are provided with open drains, 68% with brick paving and 24% have street lighting.

The principal need of the poor is sewerage and drainage. Many of the residents of around 22 villages, which have been included within municipal limits, are using hand pumps as the groundwater quality is still good and available at shallow depths. However, uncontrolled sewage continues to contaminate the shallow aquifer. As the poor don't have enough resources to pump from deep aquifer, their problems are likely to expand to water supply sector (quality issues), in the absence of proper sewerage and sanitation.

In some of the old localities of the walled city with high poor population, the existing water supply infrastructure, sewers and drains need rehabilitation. There is a need for appropriate institutional mechanism with community involvement to ensure proper maintenance of sewers, solid waste and street sanitation. Similarly, new low-income settlements need institutional mechanisms, which at present are non-existent.

6.5 HOUSES FOR URBAN POORS UNDER VAMBAY SCHEME

Table 6-5: Showing Various Details of Revised Projects for the Construction of 1400 Nos., One Room Tenements by Municipal Corporation Amritsar

Sr. No.	Name	Total numbers of tenements	Construction cost of tenements as per the limits prescribed by Govt. @ Rs. 45000/- each	Subsidy amount from Govt. (50% of cost of construction)	Total land area	Rates as per value master		Total land value	Cost of one room tenements						Total cost
						Per sq. yard	Per Acre		Land cost	Construction cost	Development cost	Low cost sanitation	Const. of Approach road or levelling cost	Total cost	
			(Rs. in lacs)	(Rs. in lacs)	Acre	Rs.	Rs.	(Rs. in lacs)	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	(Rs. in lacs)
1	2	3	4	5	6	7	8	9	10						11
1	Rabh Shikhargadh	125	56.25	28.13	0.46	1500	2,260,000.00	33.4	26089	49500	1500	5500	9800	92989	116.23
2	Village Fattahpur	150	67.5	33.75	0.56	500	2,420,000.00	13.55	963	49500	1500	5500	-	65463	98.19
3	Bhararíwal (sub-urban)	144	64.8	32.4	0.53	500	2,420,000.00	12.83	963	49500	1500	5500	6944	72407	104.26
4	Sakatribajh (sub-urban)	67	30.15	15.075	0.25	**850**	4,114,000.00	10.28	15237	49500	1500	5500	-	71737	48.06
5	Kala Ghanupur	240	108	54	0.89	500	2,420,000.00	21.54	-	49500	1500	5500	1462.5	66925.5	160.62
6	Village Mahal	518	233.1	116.55	1.92	1000	4,840,000.00	92.93	17026	49500	1500	5500	2896	77322	400.52
7	Guru ki Wadali	156	70.2	35.1	0.58	500	2,420,000.00	14.04	-	49500	1500	5500	-	65463	102.12
	Total	1400	630	315.005	5.19			198.57							1030

6.6 ISSUES OF URBAN POOR

Provision of basic services, improvement of housing quality are critical areas of action. Participatory planning process towards bringing improvements in quality of life is a way forward. MCA's annual budget (2005-6) reserved for slums is Rs 650 lakhs which is 9.75% of the development budget and 1.6% of the overall budget. Increasing the share of expenditure on services to urban poor is also required.

The major issues related to growing number of slums and the urban poor are the following:

- Increasing trend of slum population in the city
- Encroachment over valuable parcel of land present in the core of the city
- Inadequate infrastructure facilities in the slum pockets with poor sanitary condition leading to unhygienic environment
- Improper accessibility with narrow unpaved streets
- No proper street light arrangements
- Lack of awareness among the slum dwellers about different poverty alleviation programme under Central and State Government

CHAPTER - 7: INSTITUTIONAL FRAMEWORK

7.1 INTRODUCTION

Amritsars' civic administration is mainly managed by the Municipal Corporation Amritsar (MCA). Apart from MCA some of the other organizations involved in management of overall the city include Amritsar Improvement Trust (AIT), Amritsar Heritage Society, Shrimoni Gurdwara Parbandhak Committee (SGPC), Cantonment board and Punjab Urban Development Authority (PUDA). Water Supply and Sewerage Board (PWSSB) undertakes development of water supply and sewerage projects on behalf of MCA as deposit works.

7.2 MUNICIPAL CORPORATION AMRITSAR (MCA)

Amritsar Committee was upgraded to Municipal Corporation status on 29th March 1977 under the Punjab Municipal Corporation Act 1976. The first election to the Municipal Corporation was held in 1991.

Municipal Corporation Amritsar

The city has been divided into 60 municipal wards. In order to give more representation to women 20 seats are reserved for women candidates by rotation. Seats are also reserved for Scheduled caste and backward classes as per the rules.

7.2.1 FUNCTIONS OF THE CORPORATION

As per the statute, MCA has to perform a set of obligatory and discretionary functions.

Obligatory functions of the Corporation: It shall be incumbent on the Corporation to make adequate provision by any means or measures, which it may lawfully use or take for each of the following matters, namely:

- Infrastructure
    - construction, maintenance, cleaning of drains and drainage works and of public latrines, urinals and similar conveniences;
    - construction and maintenance of works for providing supply of water:
    - reclamation of unhealthy localities, the removal of noxious vegetation and generally the abatement of all nuisances:
    - scavenging, removal and disposal of filth, rubbish and other obnoxious or polluted matters;
    - lighting, watering and cleansing of public streets and other public places;
    - maintenance of a fire-brigade and the protection of life and property in the case of fire;
    - securing or removal of dangerous buildings and places;

- Health
  - registration of births and deaths;
  - public vaccination and inoculation;
  - measures for preventing and checking the spread of dangerous diseases;
- Commerce
  - construction and maintenance of municipal markets and slaughter houses and the regulation of all markets and slaughter houses;
- Transportation
  - construction, maintenance, alteration and improvements of public streets, bridges, culverts, causeways, parking
- Recreation
  - laying out or the maintenance of public parks, gardens or recreation grounds;
- Conservation
  - maintenance of monuments and memorials

Discretionary functions of Corporation: The Corporation may in its discretion provide following matters, namely:

- education including cultural and physical education;
- the establishment and maintenance of libraries, museums, art galleries, botanical or zoological collections, stadia, gymnasia, etc
- planting and care of trees
- taking of a census of population;
- providing entertainments at public places and establishment of theatres and cinemas; the organisation and management of fairs and exhibitions;
- acquisition of movable or immovable property
- construction and maintenance of buildings like:
  - rest-houses,
  - poor-houses,
  - infirmaries,
  - children's homes,
  - houses for the deaf and dumb and for disabled and handicapped children,
  - shelters for destitute and disabled persons,
  - asylums for persons of unsound mind;
  - the construction and maintenance of cattle ponds;
- building or purchase and maintenance of dwelling houses for Corporation officers and other Corporation employees;
- organisation or management of. chemical or bacteriological laboratories for the examination or analysis of water, food and drugs
- establishment and maintenance of veterinary hospitals;

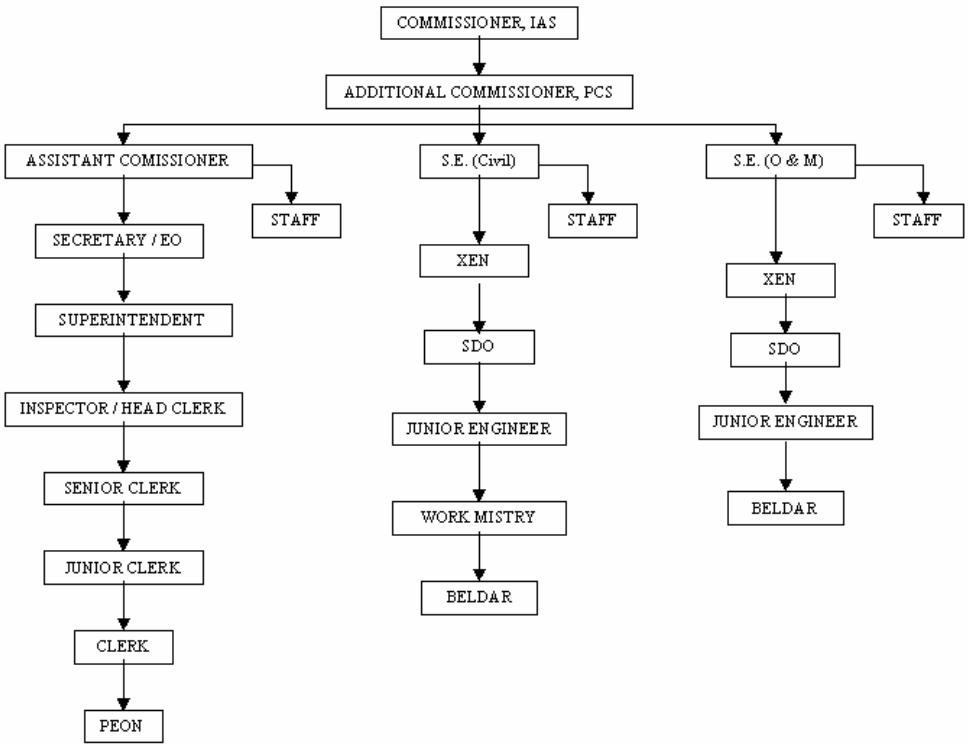
- the organisation, construction, maintenance and management of swimming pools, bathing places
- organisation and management of farms and dairies within
- organisation and management of cottage industries, handicraft centres and sales emporia;
- construction and maintenance of warehouses and godowns:
- construction and maintenance of garages, sheds and stands for vehicles and cattle biers;
- provision of housing accommodation for the inhabitants of any area or for any class of inhabitants;
- establishment and maintenance of hospitals, dispensaries and maternity and child welfare centres

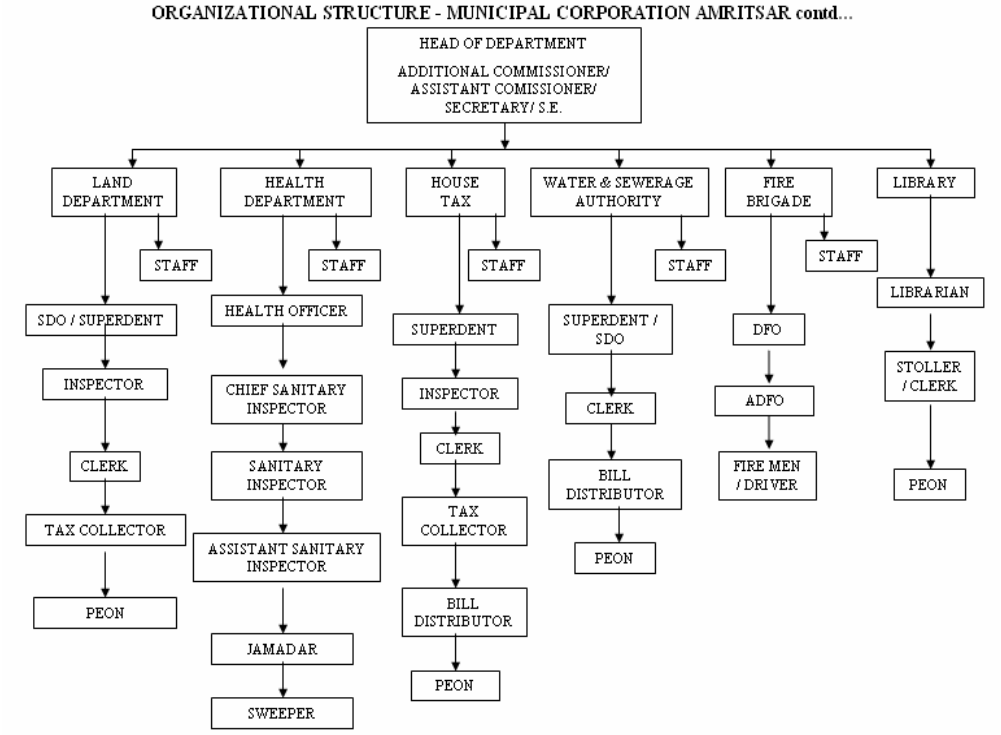
In the Discretionary function text highlighted in yellow and grey show that the functions which are being done by MCA partially and fully respectively, whereas functions shown in black text show that MCA is not performing these functions.

7.2.2 ORGANISATIONAL STRUCTURE

The MCA Organization Structure is given below:

ORGANIZATIONAL STRUCTURE - MUNICIPAL CORPORATION AMRITSAR





The MCA staff strength is 5104. Of these 119 are in Administration, 123 are technical personnel and 4863 are supporting staff. Though technical and administration staff are qualified, their exposure to innovative modern mechanisms is limited. Capacity building at all levels is required.

7.3 74TH CONSTITUTION AMENDMENTS' ACT

The 74th Constitution Amendment Act has its essence in reforms and building new systems in the structural, functional and planning areas of municipal management and capacity building. In conformity with the Constitution (74th) Amendment Act, 1992 and its notification, amendments were carried out by the GoP to the Punjab Municipal Act 1976.

Structural

- Provision for regular and fair conduct of elections to municipalities by statutorily constituted state election commission.
- A framework assigning appropriate civic functions to urban local bodies as envisaged in the Twelfth Schedule of the Constitution. Besides the core functions, the municipalities are now expected to play a crucial role in preparation and implementation of local development plans and programs for social justice.

Constitution of Finance Commission, once in every five years to recommend to their legislature, measure to improve the financial health of municipal bodies.

Functional

The Punjab Municipal Act,1976 have been amended in 1993 but no actual devolution took place as functions like regulation of land-use, town planning with development authorities, safeguarding the interest of the weaker sections, promotions of cultural, education and aesthetic aspects etc. have still not been developed to the fullest.

Planning

The absence of Metropolitan Planning Committees in Punjab, as envisaged by the 74th CAA has limited the functional role of the ULB's in planning and management to a series of sectoral and departmental plans and programs, which under no circumstances can lead to integrated planning and development of ULB's. MCA under Punjab Municipal Act is performing already the functions provided in the 74th Amendment Act.

Elected Wing

The elected wing consists of Councillors (Corporators) elected by the citizens of MCA from single member constituencies on an adult franchise. A Senior Deputy Mayor & Deputy Mayor assist the mayor and are elected from amongst the corporators. The term of these three mayors is for a period of five years. The MCA has Finance and Contract committees and House Tax Assessment Committee i.e. two statutory committees and seven ward committees which consists of elected councillors of the respective wards and headed by a chairperson.

7.3.1 SERVICE DELIVERY ARRANGEMENTS

The delivery of basic services in MCA area is as below.

S.No.	Service/Function	Planning & Design	Implementation	Operation & Maintenance
1.	Development Plan Preparation (Landuse Zoning & Regulation)	Town Planning Department, GoP	MCA	-
2.	Water Supply	Punjab Water Supply & Sewerage Board (PWSSB)	MCA	MCA
3.	Sewerage & Sanitation	PWSSB	MCA	MCA
4.	Storm Water Drainage	PWSSB	MCA	MCA
5.	Solid Waste Management	MCA	MCA	MCA
6.	Roads & drains	MCA	MCA	MCA
7.	Street Lighting	MCA	MCA	MCA
8.	Urban Transportation	MCA	Private operators	Private operators
9.	Traffic Management	Traffic Police/MCA	Traffic Police	Traffic Police/MCA
10.	Transport Registration & Regulation	_	District Transport Officer	_
11.	Parks & Play fields	MCA	MCA	MCA
12.	Health & Education	GoP & MCA	GoP & MCA	GoP & MCA
13.	Fire Services	MCA	MCA	MCA
14.	Slum Development	MCA	MCA	MCA
15.	Poverty Alleviation programs	GoI/GoP/MCA	GoP/MCA/NGO	GoP/MCA/NGO

7.3.2 PRIVATE PARTICIPATION IN URBAN SERVICES DELIVERY

Innovations in management has been in practice since long. MCA as introduced participatory processed in several areas. These include:

- Registration of Birth and Deaths including issue of computerised certificates. Online process is proposed.
- Solid waste management in about 50% of the city area has been handed over to 234 Mohalla Sudhar Committees. MCA support the committees by paying 50% amount (Rs. 1200 per sweeper per month).
- 94 public Park Management Committees manage the parks in MCA area. They employ 120 persons whose 50% salaries are paid by MCA (Rs.1000/per month per person by MCA)

7.4 RECENT MANAGEMENT REFORMS

Continuous Monitoring System

Monitoring within MCA is done at four levels mainly corporation level, zonal level, sub division level and on the field. In the regular meetings, the matter, problems/ issues and mitigation measures if possible are discussed.

Complaint Monitoring System

At the sub division level all complaints are lodged in a register either in person or through e-mail (admincorporation@sancharnet.in) or on phone. Complaints and its mitigation are carried out within a specific time period i.e. in a minimum of 24 hrs with upper limit as a week.

Computerisation

MCA has introduced computerisation in its most of the departments. The town maps are digitised and detail of each department are laid over. The corporation has its own web (www. amritsarcorp.com) which boasts of updated information regarding the various departments in MCA.

7.5 ISSUES

The major issues identified are:

- Some aspects of devolution of full powers and functions to MCA, in the spirit of 74th Constitution Amendment Act remain.
- Dependency on State/ Central government for resources and approvals
- Very Poor Data Base and Information Management
- Quality of human resources needs up-gradation. Capacity building is necessary. Need to redefine recruitment polices and guidelines.

CHAPTER - 8: URBAN FINANCES

8.1 INTRODUCTION

Municipal Corporation of Amritsar is the principal agency to prepare and execute CDP. Project financing would be carried out as per the governing rules. This chapter analyses MCA finances in terms of income and expenditure trends and identifies issues.

8.2 OVERVIEW OF MUNICIPAL FINANCES

Review of finances involves a time-series analysis of income and expenditure of MCA to ascertain trends and major sources / uses of funds. In addition to this, certain key financial indicators relating to property tax, water tax, per capita income, per capita expenditure and debt servicing; have been considered to assess the financial performance of MCA. As per taxation rules, base for property taxes will have to be assessed once in three years. Municipal Corporation is also empowered to levy property tax for residential and non-residential properties for which minimum and maximum limits are fixed. MCA uses the method of manual single entry, it needs to shift to computerised double accrual system for better management of Urban finances. Actual accounts of MCA for the last five years (2001-02 to 2005-06) have been analysed to assess finances of the corporation. The city of Amritsar has shown operating surplus in the order of Rs. 7 to 23 Crores. The city has also been undertaking developmental activities. The Corporation has a healthy opening balance of more than Rs. 54 Crores in last financial year and the positive fiscal result demonstrates officials' will to maintain fiscal control.

Table 8-1: Summary of Municipal Finances

Sl.	Items	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06
		Amounts in Rs. Lakhs				
Opening Balance			2,829.87	3,934.95	4,461.32	5,477.11
I	**Revenue Account**					
1	Revenue Income	**7,967.80**	**7,993.40 (0.32%)**	**8,417.24 (5.30%)**	**8,042.53 (-4.45%)**	**10,836.23 (34.74%)**
2	Revenue Expenditure	**5,788.01**	**6,419.82 (10.92%)**	**7,353.01 (14.54%)**	**7,662.71 (4.21%)**	**8,988.58 (17.30%)**
3	**Revenue Account Balance**	2,179.79	1,573.58	1,064.23	379.82	1,847.65
II	**Capital Account**					
1	Capital Income	**1,774.49**	**202.62 (-88.58%)**	**954.79 (371.22%)**	**1,889.08 (97.85%)**	**28,533.88 (1410.46%)**
2	Capital Expenditure	**1,124.41**	**671.12 (- 40.31%)**	**1,492.65 (122.41%)**	**1,253.11 (-16.05%)**	**2,368.69 (89.02%)**
3	**Capital Account Balance**	650.08	- 468.50	- 537.86	635.97	26,165.19

Note: *The figures have been computed based on the annual accounts' figures provided by the MCA.*

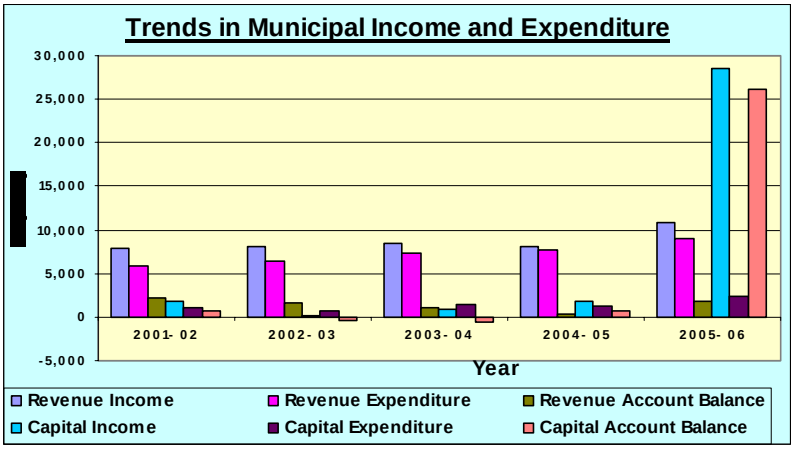


Figure 8-1: Trend in Municipal Income and Expenditure

The revenue account has shown significant surpluses over years. It represented an upward trend from Rs. 2179 lakhs in 2001/02 to Rs. 10,563 lakhs in 2005/06, while the capital account has also picked up after recording deficit for three years (Refer Table 8-1) indicating transfer of revenue surplus for assets' creation on a regular basis, which is a positive feature. In-spite of deficit in capital account, the overall municipal account has been continuously in surplus during the assessment period indicating the sound financial health of the Corporation. The revenue income of the corporation has grown at a rate of 8.98 per cent, while the growth in revenue expenditure during the same period was only 11.74 per cent.

The trends in capital income and expenditure have been fluctuating. The growth rate in capital income is 380.35% largely owing to large amount of income from sale of land, while the capital expenditure has grown at 38.77 per cent.

Table 8-2: Summary of Municipal Finances

Amount in Rs. Lakh

Description		2001-02	2002-03	2003-04	2004-05	2005-06
Revenue Account						
Revenue Income- Own Sources						
A	Taxes	3780.72	5147.75	5548.64	4904.33	4468.86
B	Fees & Charges	1309.91	1471.58	2222.15	1675.26	1391.37
C	Income from Municipal Property (excl. sale of Land)	1418.27	879.27	645.60	326.53	145.21
	Sub-Total Own Sources (I=A to C)	6508.90	7497.81	8417.24	6906.12	6005.44
II	Grants & Contributions	1458.90	495.59	-	1136.41	4830.79
	Grand Total Revenue Income (I + II)	**7,967.80**	**7,993.40**	**8,417.24**	**8042.53**	**10836.23**
Revenue Expenditure						
I	General Administration	191.00	197.73	261.03	272.79	301.12
II	Octroi Administration & Collection	313.13	294.03	303.68	330.26	378.42
III	Tax Administration & Collection (House Tax)	75.24	79.61	80.88	95.02	117.75
IV	Fire Services	139.49	135.46	129.41	159.38	187.86
V	Street Lighting	255.83	517.44	509.56	449.03	553.70

Description		2001-02	2002-03	2003-04	2004-05	2005-06
VI	Water Supply	1419.22	1735.92	2061.05	1921.04	2082.65
VII	Health / Sanitation	1980.08	1965.11	2171.34	2474.29	2740.62
VII	Roads & Bridges (Nigam Engg. & Supporting staff)	509.34	495.61	478.68	528.73	684.93
IX	Medical & Health Facilities	383.17	349.88	451.47	478.15	489.88
X	Leisure, Recreation & Entertainment Services (Gardens, Stadium, Gym, etc.)	137.18	176.55	149.27	208.43	221.12
XI	Other Services (Public Safety, Cattle Pounds, Slaughter House, etc.)	185.22	221.48	216.91	258.23	759.54
XII	Miscellaneous Expenditure	14.47	8.99	10.29	39.85	59.32
XIII	Debt Servicing	97.24	143.16	413.97	300.38	252.58
XIV	Tehabzari	32.99	40.44	49.27	49.81	46.74
XV	Building Application fee	53.83	59.06	66.91	97.32	113.26
	Grand Total Revenue Expenditure (I TO XV)	**5,788.01**	**6,419.82**	**7,353.01**	**7,662.71**	**8,988.58**
	Status - Revenue Account	**2,179.79**	**1,573.58**	**1,064.23**	**379.82**	**1847.65**
	Operating Status (Revenue Surplus before DS)	**2,277.08**	**1,716.47**	**1,477.91**	**680.22**	**2100.18**
	CAPITAL ACCOUNT					
	Capital Income					
	Sale of Assets	119.07	202.62	454.77	793.79	8505.95
	Loans	186.14	-	500.02	300.36	19340.26
	Grants	1469.28	-	-	794.74	687.67
	Grand Total Capital Income	**1,774.49**	**202.62**	**954.79**	**1,889.08**	**28,533.88**
	Capital Expenditure					
	Grand Total Capital Expenditure	**1,124.41**	**671.12**	**1,492.65**	**1,253.11**	**2,368.69**
	Status - Capital Account	650.08	-468.5	-537.86	635.97	26,165.19

Table 8-3: Summary of Municipal Finances

Amount in %

Description		2001-02	2002-03	2003-04	2004-05	2005-06
Revenue Account						
Revenue Income- Own Sources						
A	Taxes	47.45%	64.40%	65.92%	60.98%	41.24%
B	Fees & Charges	16.44%	18.41%	26.40%	20.83%	12.84%
C	Income from Municipal Property (excl. sale of Land)	17.80%	11.00%	7.67%	4.06%	1.34%
	Sub-Total Own Sources (I=A to C)	81.69%	93.80%	100.00%	85.87%	55.42%
II	Grants & Contributions	18.31%	6.20%	0.00%	14.13%	44.58%
	Grand Total Revenue Income (I + II)	**7,967.80**	**7,993.40**	**8,417.24**	**8042.53**	**10836.23**
Revenue Expenditure						
I	General Administration	3.30%	3.08%	3.55%	3.56%	3.35%
II	Octroi Administration & Collection	5.41%	4.58%	4.13%	4.31%	4.21%
III	Tax Administration & Collection (House Tax)	1.30%	1.24%	1.10%	1.24%	1.31%
IV	Fire Services	2.41%	2.11%	1.76%	2.08%	2.09%
V	Street Lighting	4.42%	8.06%	6.93%	5.86%	6.16%
VI	Water Supply	24.52%	27.04%	28.03%	25.07%	23.17%
VII	Health / Sanitation	34.21%	30.61%	29.53%	32.29%	30.49%
VII	Roads & Bridges (Nigam Engg. &	8.80%	7.72%	6.51%	6.90%	7.62%

Description		2001-02	2002-03	2003-04	2004-05	2005-06
	Supporting staff)					
IX	Medical & Health Facilities	6.62%	5.45%	6.14%	6.24%	5.45%
X	Leisure, Recreation & Entertainment Services (Gardens, Stadium, Gym, etc.)	2.37%	2.75%	2.03%	2.72%	2.46%
XI	Other Services (Public Safety, Cattle Pounds, Slaughter House, etc.)	3.20%	3.45%	2.95%	3.37%	8.45%
XII	Miscellaneous Expenditure	0.25%	0.14%	0.14%	0.52%	0.66%
XIII	Debt Servicing	1.68%	2.23%	5.63%	3.92%	2.81%
XIV	Tehabzari	0.57%	0.63%	0.67%	0.65%	0.52%
XV	Building Application fee	0.93%	0.92%	0.91%	1.27%	1.26%
	Grand Total Revenue Expenditure (I TO XV)	**5,788.01**	**6,419.82**	**7,353.01**	**7,662.71**	**8,988.58**
	Status - Revenue Account	**2,179.79**	**1,573.58**	**1,064.23**	**379.82**	**1847.65**
	Operating Status (Revenue Surplus before DS)	**2,277.08**	**1,716.47**	**1,477.91**	**680.22**	**2100.18**
	CAPITAL ACCOUNT					
	Capital Income					
	Sale of Assets	6.71%	100.00%	47.63%	42.02%	29.81%
	Loans	10.49%	0.00%	52.37%	15.90%	67.78%
	Grants	82.80%	0.00%	0.00%	42.07%	2.41%
	Grand Total Capital Income	**1,774.49**	**202.62**	**954.79**	**1,889.08**	**28,533.88**
	Capital Expenditure					
	Grand Total Capital Expenditure	**1,124.41**	**671.12**	**1,492.65**	**1,253.11**	**2,368.69**
	Status - Capital Account	650.08	- 468.50	- 537.86	635.97	26,165.19

In addition the Municipal Corporation undertakes infrastructure projects, such as improvement in water supply, conservancy related works, development of commercial complexes, etc. The sources-wise uses of the general fund of the corporation (revenue and capital account) are discussed in detail in the following sections.

8.3 REVENUE ACCOUNT

The revenue account comprises of operating income and expenditure items of the corporation. These are generally recurring items viz. income from taxes (octroi, property, other direct taxes), non-tax income (rents on municipal properties, charges, fees), grants, etc. and expenditure on establishment, repairs and maintenance, debt-servicing, etc.

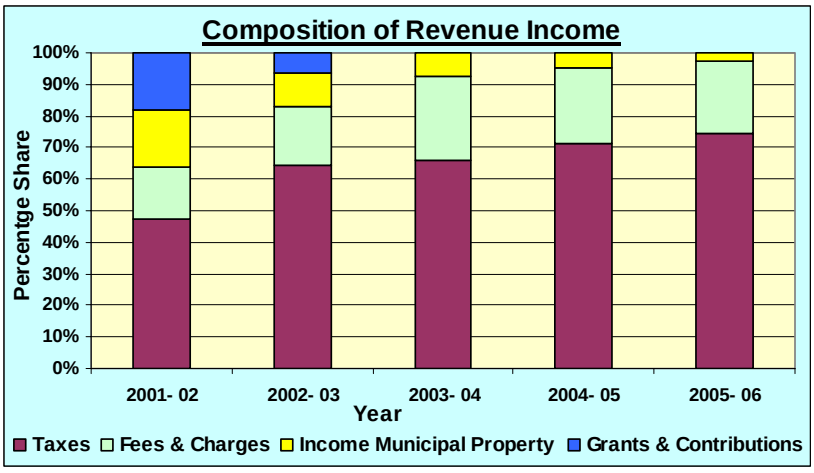
8.3.1 SOURCES OF FUND – REVENUE INCOME

The income sources of municipal fund may be categorized as own sources (octroi, tax and non-tax sources) of the corporation, general grant and contributions. Table 8-4 presents summary of income under different categories of source.

Table 8-4: Summary of Revenue Income by Source Categories

	Own Sources	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06
A	Taxes					
1	Octroi / Chungi	41.51%	55.67%	57.09%	60.65%	46.68%
2	House Tax	5.67%	6.47%	6.66%	7.88%	6.05%
3	Excise Duty	0.00%	1.98%	1.92%	2.13%	21.32%
4	Advertisement tax	0.10%	0.09%	0.11%	0.14%	0.17%

	Own Sources	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06
5	Show Tax	0.04%	0.04%	0.03%	0.03%	0.03%
6	Entertainment Tax	0.03%	0.02%	0.02%	0.02%	0.03%
7	Other Taxes	0.11%	0.13%	0.09%	0.16%	0.13%
	Sub-Total A	47.45%	64.40%	65.92%	71.01%	74.29%
B	Fees & Charges					
1	Building Fee & Development Charges	2.97%	1.77%	3.76%	1.96%	2.40%
2	Scavenging Fee	0.32%	0.36%	0.31%	0.28%	0.33%
3	Slaughter House Fee	0.05%	0.04%	0.04%	0.04%	0.04%
4	Water Charges	10.07%	11.81%	16.30%	17.93%	15.96%
5	other fees of MTP public development charges	2.86%	3.45%	1.67%	3.59%	4.33%
6	cooking food licence	0.01%	0.01%	0.01%	0.00%	0.00%
7	copying fees	0.00%	0.00%	0.45%	0.00%	0.00%
8	composition fees land	0.05%	0.04%	0.01%	0.02%	0.01%
9	Composition fee octroi	0.00%	0.83%	3.76%	0.34%	0.00%
10	composition fee health	0.02%	0.02%	0.01%	0.01%	0.01%
11	Licence fee	0.09%	0.09%	0.07%	0.09%	0.10%
	Sub-Total B	16.44%	18.41%	26.40%	24.26%	23.17%
C	Income from Municipal Property (excl. sale of Land)					
1	Rent on Land & Markets (property)	1.10%	1.18%	1.50%	1.52%	0.93%
2	Tehbazari (Rent from Vendors)	0.94%	0.94%	0.93%	0.96%	0.71%
3	Others	15.76%	8.88%	5.25%	2.25%	0.77%
	Sub-Total C	17.80%	11.00%	7.67%	4.73%	2.42%
	Total (Own Source)	81.69%	93.80%	100.00%	100.00%	100.00%
	Grants & Contributions					
1	Grant in Lieu of abolition of Octroi	14.48%	6.20%	-	-	-
2	Devolution of Tax and Other grants	3.83%	-	-	-	-
	Total Grants & Contributions	18.31%	6.20%	-	-	-
	GRAND TOTAL	7,967.80	7,993.40	8,417.24	8,042.53	10,836.23



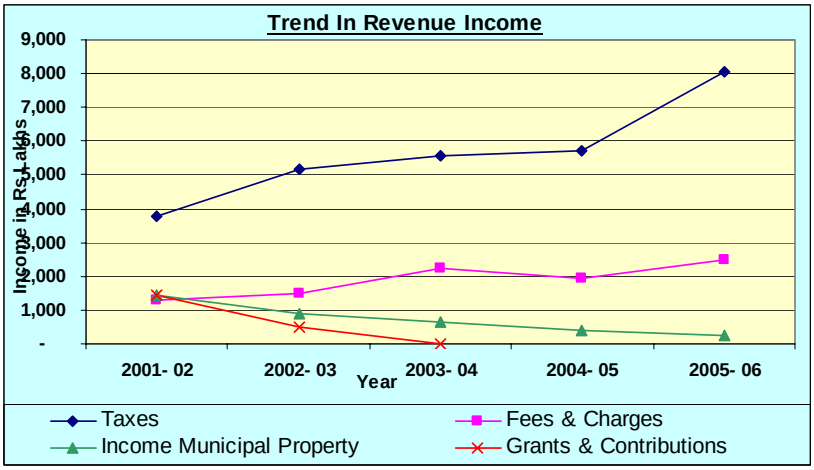


Figure 8-2: Composition and Trend in Revenue Income

The contribution (Table 8-4) shows marginal fluctuation on a higher side during the last five years. MCA derived 52.01 % of its revenues from octroi and total own sources of income amounting to 95.48 % and a mere 4.52 % from non-tax sources. Octroi and property tax dominated the tax structure, with octroi accounting to 79.63 % of tax revenues and property tax accounting to about 10% of tax revenues. The low non-tax receipts can be attributed to low rates of user charges for services against considerably good service coverage. In effect the corporation's income largely depends on a single source i.e. octroi, whose contribution has been constant between 40 to 60 % for past five years.

8.3.2 OWN SOURCES

The MCA levies property tax and service-based taxes of different type against the services provided by it to the citizens. The corporation also owns assets in the form of land and buildings, which are leased/ rented out to generate revenue. The income from such sources contributes to the own source income of MCA.

8.3.2.1 Octroi

Octroi is levied on goods entering within municipal limits for use, consumption or sale. Financial results for last five years show that, octroi has been the single largest revenue source for corporation, contributing about 52.01 per cent in total revenue income. The amount realised under octroi has shown an upward trend during 2000-01 to 2004-05 However it showed a surprising down in the last financial year. Octroi income has increased at a growth rate of 11.4 per cent per annum.

8.3.2.2 Taxes

The tax sources accounts for fairly large share of the total revenue income (other than octroi). The tax sources have shown a growth rate of 22.01%. The taxes levied by the corporation include:

- Property tax
  - Property Tax, and
  - Water and sewerage charges
- Other direct taxes;
  - Vehicle tax, and
  - Theatre tax.
- Other taxes/ refund.

Property Tax

The property related taxes are commonly referred as house tax and include a tax on buildings or lands situated within the municipal limits. In some local bodies, it is observed that a consolidated tax is being levied in place of property tax. The MCA levies property tax on residential, commercial and industrial buildings that lie within its jurisdiction. The revisions for rateable value are done regularly for each property separately.

Demand Collection and Balance Statement of Property Tax

		2001- 02	2002- 03	2003- 04	2004- 05	2005- 06
1	**No. of Properties**	**145,000**	**151,000**	**160,000**	**175,000**	**184,000**
	Residential	120,000	123,000	130,000	145,000	152,000
	Non-Residential	25,700	28,226	29,746	30,700	32,989
2	Rateable value - Rs. Lakh	3,500.00	3,700.00	3,900.00	4,560.00	4,850.00
3	**Demand- Rs. Lakh**					
	Current	510.00	573.00	614.00	676.00	730.00
	Arrear	657.00	787.00	800.00	813.00	915.00
	Total Demand	**1,167.00**	**1,360.00**	**1,414.00**	**1,489.00**	**1,645.00**
4	**Collection- Rs. Lakh**					
	Current	285.00	262.00	365.00	385.00	375.00
	Arrear	190.00	255.00	200.00	250.00	279.00
	Total Collection	**451.49**	**517.37**	**560.19**	**633.41**	**656.11**
5	**Collection Performance- %**					
	Current	55%	46%	60%	57%	51%
	Arrears	29%	32%	25%	31%	31%
	Total	**41%**	**38%**	**40%**	**43%**	**40%**

Water and Sewerage Charges

The MCA levied water charges to all assessments having house service connection within the MCA limits. Realisations of the order of 13.57 crores have been done as against a demand raised of 37 crores in the last financial year. The rates were last revised during financial year 2003 – 04. The following are the details of the rates for water and sewerage charges.

Table 8-5: Un-Metered Water Supply Tariffs

Plot Size	Rate for Water per connection per month(in Rs)				
	Financial Year				
	2003-04	2004-05	2005-06	2006-07	2007-08
Upto 5 marla (125 sqmt)	50	55	60	70	100
Above 5 marla but less than 10 (125 – 250 sqmt)	75	80	90	100	105
Above 10 marla but less than 1 kanal (250 – 500 sqmt)	100	110	120	130	140
1 kanal and above (500 sqmt or more)	Metered Supplies only				

Table 8-6: Metered Water Supply Tariffs

Plot Size	Rate for Water per cubic metre (in Rs)				
	Financial Year				
	2003-04	2004-05	2005-06	2006-07	2007-08
Metered water connections (domestic)	2	2.6	3.2	3.5	3.8
Metered water connections (commercial and industrial)	4	5.2	6.4	7	7.6

Table 8-7: Sewerage Tariffs

Plot Size	Rate for Sewerage per connection per month(in Rs)				
	Financial Year				
	2003-04	2004-05	2005-06	2006-07	2007-08
Upto 5 marla (125 sqmt)	50	55	60	65	70
Above 5 marla but less than 10 (125 – 250 sqmt)	75	80	90	100	105
Above 10 marla but less than 1 kanal (250 – 500 sqmt)	100	110	120	130	140
1 kanal and above (500 sqmt or more)	Charges as for water				
For own sources of water supply	Equal to charges for metered water supply, in each year				

Non-Tax Sources

The non-tax own revenue sources of the MCA accounts for 4.52% cent of the total revenue income. These revenue sources include fees and charges levied as per the legislation.

These revenue sources include the income from leased/ rented out municipal property and from the fees and charges levied for the different services rendered by the corporation. The increase in non-tax collection could be attributed to good collection be reflected in the non-availability of new sources.

8.3.3 REVENUE ACCOUNT EXPENDITURE

The following table presents a summary of revenue expenditure of the MCA. The total revenue expenditure has increased from Rs. 56119.93 lakhs in 2000-01 to Rs. 59647.62 lakhs in 2004-05 – a growth of 1.60 per cent.

Table 8-8: Summary of Revenue Expenditure of MCA

		2001- 02	2002- 03	2003- 04	2004- 05	2005- 06
	Revenue Expenditure					
I	General Administration	3.30%	3.08%	3.55%	3.56%	3.35%
II	Octroi Administration & Collection	5.41%	4.58%	4.13%	4.31%	4.21%
III	Tax Administration & Collection (House Tax)	1.30%	1.24%	1.10%	1.24%	1.31%
IV	Fire Services	2.41%	2.11%	1.76%	2.08%	2.09%
V	Street Lighting	4.42%	8.06%	6.93%	5.86%	6.16%
VI	Water Supply	24.52%	27.04%	28.03%	25.07%	23.17%
VII	Health / Sanitation	34.21%	30.61%	29.53%	32.29%	30.49%

		2001- 02	2002- 03	2003- 04	2004- 05	2005- 06
VIII	Roads & Bridges (Nigam Engg. & Supporting staff)	8.80%	7.72%	6.51%	6.90%	7.62%
IX	Medical & Health Facilities	6.62%	5.45%	6.14%	6.24%	5.45%
X	Leisure, Recreation & Entertainment Services (Gardens, Stadium, Gym, etc.)	2.37%	2.75%	2.03%	2.72%	2.46%
XI	Other Services (Public Safety, Cattle Pounds, Slaughter House, etc.)	3.20%	3.45%	2.95%	3.37%	8.45%
XII	Miscellaneous Expenditure	0.25%	0.14%	0.14%	0.52%	0.66%
XIII	Debt Servicing	1.68%	2.23%	5.63%	3.92%	2.81%
XIV	Tehabzari	0.57%	0.63%	0.67%	0.65%	0.52%
XV	Building Application fee	0.93%	0.92%	0.91%	1.27%	1.26%
	Grand Total Revenue Expenditure (I TO XV)	**5,788.01**	**6,419.82**	**7,353.01**	**7,662.71**	**8,988.58**

The major share in revenue expenditure goes to water supply and health/sanitation that take a share of 25.56% and 31.43% of the total revenue expenditure respectively. The others have been relatively smaller players in contributing to revenue expenditure.

8.3.4 STATUS OF REVENUE ACCOUNT

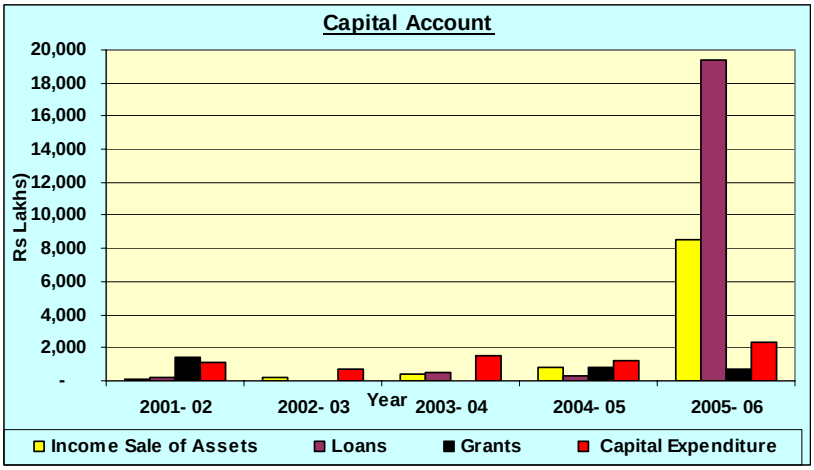
MCA's revenue account has shown surpluses all through out the last five years which was mainly contributed to the capital account for taking up new works. The available surpluses have increased from Rs. 2277 lakhs in 2001-02 to Rs 2100.1 lakhs during 2005-06. Appropriation also must have been carried out from revenue surplus to the capital accounts, which could have mainly led to reduction in the capital deficit.

8.4 CAPITAL ACCOUNT

The corporation spends considerable amounts on capital works- such as creation of infrastructure assets - water supply and drainage works, roads, conservancy schemes, purchase of vehicles, plant and machinery, etc. The corporation's funds for capital expenditure are a mix of loans, grants, assistance from financial institutions and from own sources.

Table 8-9: Capital Account Details (all figures in lakhs)

	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06
Capital Income					
Sale of Assets	6.71%	100.00%	47.63%	42.02%	29.81%
Loans	10.49%	-	52.37%	15.90%	67.78%
Grants	82.80%	-	-	42.07%	2.41%
Grand Total Capital Income	**1774.49**	**202.62**	**954.79**	**1889.08**	**28533.88**
Capital Expenditure					
Grand Total Capital Expenditure	**1,124.41**	**671.12**	**1,492.65**	**1,253.11**	**2,368.69**
Status - Capital Account	650.08	(468.50)	(537.86)	635.97	26165.19



8.4.1 CAPITAL INCOME

The total capital income of MCA was Rs 28533.88 lakhs in the year 2005-06. This high value as against Rs 1774.49 lakhs was attributed to large amount of sale of assets and loan taken in the last financial year. The share of capital grants and contribution to total capital income is 25.46% and loans and borrowings contribute around 29.31%.

8.4.2 CAPITAL EXPENDITURE

Capital expenditures are the most flexible item of the city's budget, and are normally contingent upon receipt of associated revenue. The capital expenditure of MCA includes all expenditure incurred on creation/ acquisition of capital including construction of buildings and infrastructure systems and purchase of furniture, plant/ equipment, machinery and vehicles. The summary of expenses under various heads of capital account is presented in following table.

Table 8-10: Summary of Capital Expenditure of MCA

	Capital Expenditure	2001- 02	2002- 03	2003- 04	2004- 05	2005- 06
1	Street Light	6.59%	8.21%	19.89%	26.23%	17.94%
2	Roads	28.52%	13.73%	25.15%	24.02%	28.97%
3	Public Works (incl. City beautification, etc.)	-	-	7.07%	3.99%	1.48%
4	Other City Development Works	49.07%	67.68%	32.74%	34.78%	43.23%
5	Specific Grant-based Works					
	Slum Improvement	8.33%	4.79%	4.47%	7.70%	8.16%
	MLA's local development program	2.12%	-	0.78%	2.79%	-
	M.P's urban development program	4.89%	5.05%	9.40%	0.32%	0.21%
	SJSRY Works	0.47%	0.54%	0.50%	0.17%	0.01%
	Grand Total Capital Expenditure	1,124.41	671.12	1,492.65	1,253.11	2,368.69

It has been observed that the maximum expenditure has been incurred on Roads and street light have been taking up a large share of the capital expenditure – an average share of about 24% and 16% respectively. However other developmental works account for the largest share to an average of about 45%.

8.5 OUTSTANDING LIABILITIES

Comment: Remove this section here and include it into Section 11.3.6 debt servicing

The total outstanding loan including the overdue principal and interest as on March 2006 is Rs. 13.80 crores. It may be noted that loans have been taken from Amritsar Improvement Trust. The ratio of outstanding liabilities to total property tax demand is 0.84

Comment: Update these figures to the latest data

8.6 KEY FINANCIAL INDICATORS

This section gives the financial indicators which helps analysing the efficiency and operational performance, and debt servicing. These have been calculated as an average over a period of five years, which provides a more realistic picture.

- **Operating Ratio**

Operating ratio (OR) is the ratio of revenue expenditure to revenue income and it indicates financial status or "profitability" of the local body operations. Sound financial management requires that this ratio should be less than unity. The average OR of MCA works out to 0.84. The OR below 1.0 in MCA indicates that it has had a surplus revenue account over the last five years.

- **Debt Servicing Ratio**

Debt Servicing Ratio (DSR) is ratio (expressed in percentage) of debt payment to total revenue income. This indicator helps in assessing the implication of debt on the local body finances. But it has been observed that the local body service their debt on a regular basis. The analysis indicates that the average DSR with respect to revenue income is 2.80 per cent.

- **Capital Utilisation Ratio**

Capital Utilisation is the ratio of capital expenditure to the capital income. This ratio indicates the performance of the local body in terms of utilisation of capital income- it could also be an indicator of the Local Bodies' capacity to utilise capital resources. A capital utilisation ratio of greater than unity indicates that revenue account surplus have been utilised for capital works, which is a positive feature. A CU ratio below unity indicates that either capital income is being diverted for revenue expenditure (when O.R is also above 1), or that part of capital income is unspent during the financial year under consideration.

The years in which the CUR of MCA is high indicates too much of non-plan expenditure and hence capital utilization and improvement plan/ program is necessary. The average CU ratio is 1.24. The high capital utilisation ratio over two years could be attributed to the fact that the capital income received by the MCA have been utilised to its fullest extent before the close of the financial year. The years 2002-03 and 03-04 had CUR of 3.31 and 1.56 respectively.

8.7 CONCLUSION

- Generally the income is growing at an average rate of 8.98% which is low.
- The growth rate of Expenditure is at the rate of 11.74%, which is fairly moderate, however this rate is more than that of income growth which indicates that the financial health of MCA is not in full control of their finances, this may deteriorate in future.
- Presently, MCA mainly depends on three sources for Income

1. Octroi which at a share of 52.01 stands as a major source of income was abolished in 2001 with compensation from government in lieu of it. It was again introduced in 2002 and will stand abolished from September 2006. However the state government has committed to compensate from VAT sources in the form of a share from VAT for Amritsar.
2. The collection ratio however is still low ranging around 40%. This needs to be increased to improve on self sustenance of MCA. Also the revisions in rateable value for property tax need to be done on regular basis.
3. Excise duty on wine provides for another major share in the Revenue income. This will continue in future.

- Capital income is mainly supported by the sale of lands and assets. Land of the order of 525 acres is still there with MCA for use and can be worth Rs 7000 Crores.
- Capital expenditure is in terms of Rs 6crore to Rs 24 crore. The local body has spent Rs 51.13 crore under the head of Capital expenditure over last three years.
- Computerisation and GIS based property tax collection, needs to be practiced, to improve on revenue income. This would further strengthen financial health of the city.
- Given the fact that Amritsar is a religious place with good heritage and tourism development options; certain revenue pertaining to these fields can be considered to raise resources.

CHAPTER - 9: THE VISION

9.1 INTRODUCTION

The Vision for the city has been formulated through the consensus approach and continued consultation with the stakeholders on strengths, current issues, concerns, problems and desirable future focus areas.

9.2 SWOT ANALYSIS

Amritsar city, the most sacred place for the Sikh religion, has a strong religious, socio-cultural base and a historical origin. As part of undivided India, the city enjoyed the status of an industrial and trade town with a flourishing textile industry. With partition, the city lost its industrial base. Further its border status with Pakistan and the continued internal security made the city unattractive to the investors. The decade of eighties saw upsurge of terrorism which further eroded the economic base. In fact, these developments had multiple effects on the city's status and the industries and trade investments moved out. With reduced incomes in the city the upkeep and investments in infrastructure came to a stand still. While this happened the rural populace saw the city as the only safe place with large-scale migration, reflected in the high rate of population growth during the 90's. This added further pressure on the already over burdened city infrastructure and coupled with slow growth in the formal jobs led to proliferation of informal sector and slum proliferation. These issues have been exaggerated by the lack of integrated planning, fragmented governance and weak fiscal systems.

The SWOT analysis performed for Amritsar is summarized below.

Strengths

The key strengths are:

- Its religious significance, rich history and culture which makes the place unique and bring people from all over the world.
- Linked to it are its people known for their entrepreneurship and hospitality.
- Proactive state and local governments.
- Absence of labour issues.
- Regional hub for education and health facilities.

Weaknesses

Its main weaknesses are:

- The inadequacies in Infrastructure.
- Inadequate Growth /Land Management leading to proliferation of slums and also constraining accessibility and mobility.
- Lack of focused effort on Heritage Conservation and promotion.
- Unemployment and growth of informal sector.
- Limited institutional capacities.

- Limited attention on provision of basic services (including housing) to the urban poor.

Opportunities

The city has abundant opportunities to exploit:

- Tourism, as an industry is rapidly growing and Amritsar is beginning to reap the benefits of the same. This mainly includes religious tourism around Amritsar would need to be considered for sustainable economic growth of the city.
- Improved security in the region presents multiple opportunities.
- Infrastructure Development in all sectors could be the key economic driver in the medium term.
- Proximity to international connectivity can transform Amritsar into a strong regional economic hub. Amritsar Airport has an international cargo centre in place and the Wagha corridor is today a global necessity for an access to Central Asia for Tourism as well as for trade.
- Strong potential to emerge as a major international transit hub.
- SEZ under consideration.
- MCA holds a large amount of land under its possession which it can leverage.
- Access to Assistance under JNNURM.

Threats

- Being situated in proximity to the international border, any change in the goodwill scenario of Indo-Pak relationship will lead to emergency situation in this urban centre leading to Negative Investor perception.
- Inter-Regional Competitions for Economic Space (Ludhiana, Chandigarh).

Based on an assessment of state of the city and the prospects the citizen of Amritsar resolved the following to be vision for 2025.

9.3 VISION AMRITSAR 2025

THE VISION:

“AMRITSAR TO BE AN INTERNATIONAL CULTURAL, HISTORICAL, PILGRIM CENTRE WITH AGRO-BASED FOOD PROCESSING DESTINATION, HAVING IMPROVED WORLD CLASS URBAN INFRASTRUCTURE & TRANSPORT SYSTEM.

IT SHALL CATER NEEDS OF THE SURROUNDING SETTLEMENTS AS A CENTRAL PLACE FOR THEIR SOCIAL NEEDS LIKE HEALTH & EDUCATION. THE DEVELOPMENT SHALL BE ENVIRONMENTALLY, ECONOMICALLY AND SOCIALLY COHESIVE FOR TAPPING THE HIDDEN POTENTIALS OF THE CITY, BOTH AS A TOURISTS & CENTRE AS TRADE & COMMERCE HUB.”

The goals to achieve the vision are:

a. **Sustainable economic development** of the city based on its inherent strengths**:**

i. Through conservation, preservation and development of heritage, culture (Urban Renewal)

ii. Promotion of tourism

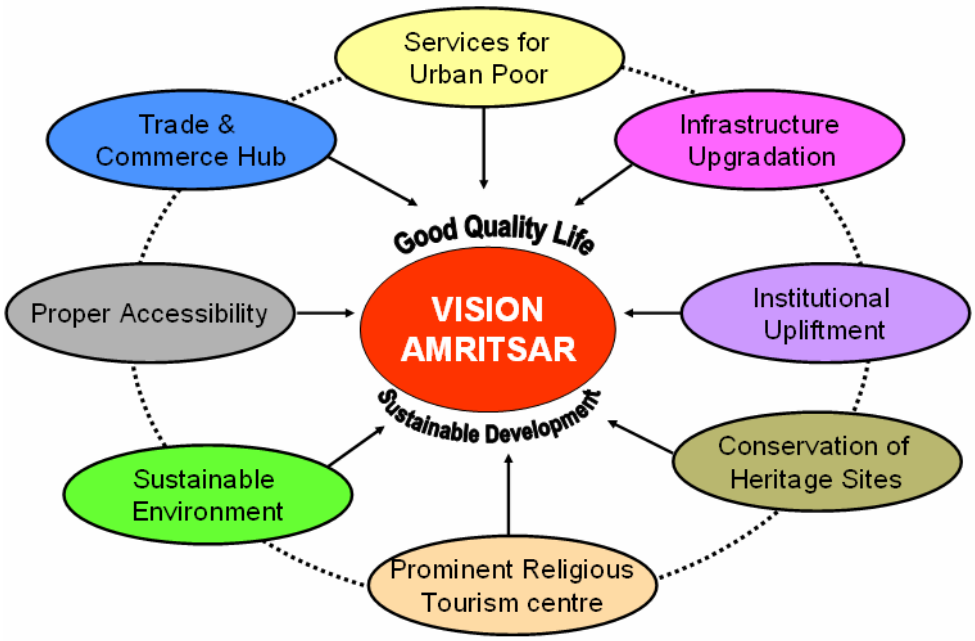
iii. Promotion of trade, education and industrial sectors

b. Planned city growth

c. **Integrated infrastructure development** with a focus on strengthening existing systems, augmentation, equitable coverage and sustainability

d. Improved access to housing and urban basic services to the urban poor

e. Efficient and Responsive Municipal Corporation/Urban Governance



9.4 OVERALL INVESTMENT PLAN

To achieve the Goals as outlined above MCA has formulated a set of workable interventions which includes investment programs, management improvements and reforms. The capital requirement reach the vision (2025) is estimated at: Rs. 3150 Crores.

9.5 SECTORAL VISION, NEEDS, STRATEGIES AND PRIORITIES

All sectors covering development of the city, the potentials, the history and physical development aspects, unique attributes, comparative and competitive advantages, values and preferences of the city residents have been considered and the following is envisaged.

9.5.1 SUSTAINABLE ECONOMIC DEVELOPMENT

Goal: Sustainable economic development of the city based on its inherent strengths of the city

- Through urban renewal, conservation, preservation, and development of heritage and cultural resources.
- Through Promotion of tourism.
- Promotion of trade, education and industrial sectors.

9.5.1.1 Conservation, preservation and development of heritage and culture (Urban Renewal)

Goal: Addressing problems of the old city and its renewal, conservation and restoration of structures of historical importance and evolve environment which imparts distinct identity to Amritsar's vibrant art, culture and tradition

Key Issues

- The old city with its compact organisation is a case for urban renewal and conservation.
- Most of the heritage buildings/ structures in the Walled city are in dilapidated condition
- Protection and maintenance of these monuments are very poor. Most of the owners are unaware of the significance of the building and do not get any support from concerned agency/ organization
- Absence of any proper recording and certification of old structures of historical importance
- New developments in the surrounding often subduing the heritage structures, portraying lack of any urban aesthetics

9.5.1.2 Strategy

The built heritage includes national buildings, streets, haveillis, architectural features, wells, street pattern and special places of cultural interest, the character and appearance of which is important to preserve. The important elements include Katras, Temple Complexes, Gates, Gardens, etc. The strategies identified to conserve and preserve the monuments of historical importance are the following:

- Need for a comprehensive, integrated and sensitive plan for the walled city to address the issues of urban renewal, urban design and urban conservation.
- Identify structures of historical importance and generate list of structures for heritage conservation by a competent authority.
- Organizing heritage walks in the Walled city revealing the glorious past.
- People's participation is an important component. Involvement of NGOs/ CBOs in the process to make mass awareness and create environment for conservation.

9.5.1.3 Projects

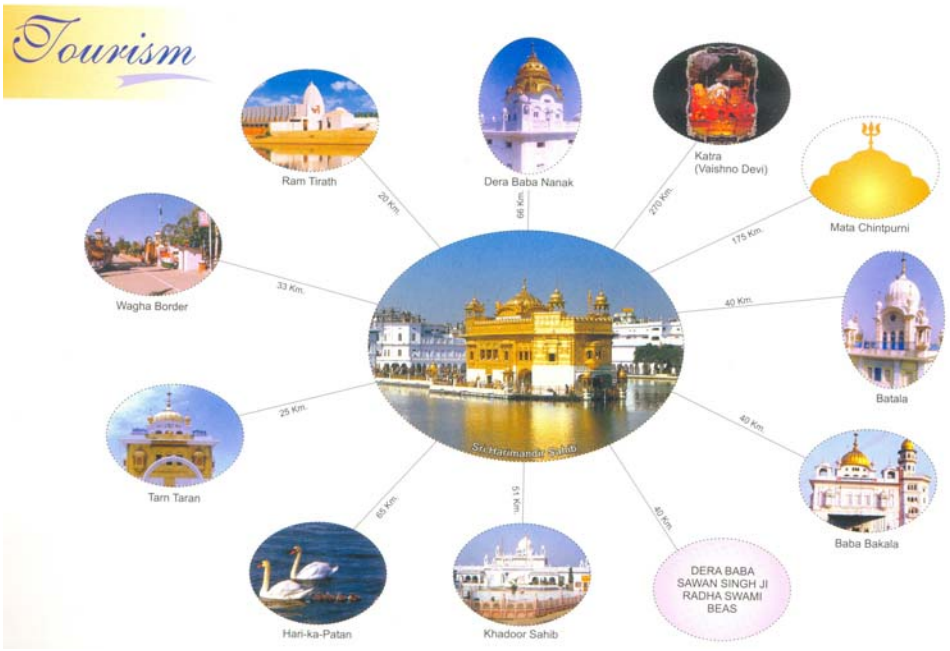
The projects for urban renewal and conservation will initiate from the year 2006 onwards. They have been identified by as below:

S. No.	Description of Project	Cost (Rs. in Cr.)
1.	Preparation of detailed and comprehensive plan for urban renewal, conservation and design	5
2.	Urban renewal including streets, katras and precincts. Suitable storm water drainage and related infrastructure	Included in the Integrated Infrastructure Project
3.	Special project for gates including restoration, cleaning and upgrading surrounding areas	15
4.	Conservation of heritage buildings, including private buildings and their incorporation in public domain (With participatory Process)	15
5.	Support public work, NGO's, public awareness etc.,	1
	TOTAL	**36**

Total Project cost for heritage and conservation project is Rs. 36/- Crores. (Rupees thirty six crores only).

9.5.1.4 Promotion of Tourism

The Amritsar that greets visitors today is a bustling, busy city with a distinct 'frontier' atmosphere. Amritsar (amrit + sar), as the name suggests, is rightfully a pool of nectar. Located in the state of Punjab, Amritsar is one of the most important pilgrimage centers especially for the Sikhs in the country. The city is characterized by some of the must visit religious, historical as well as contemporary sites of importance. The Golden Temple, where Sikhs from all over the world come to pay their reverence to Guru Granth Sahib and take a dip in the Amrit Saras Kund (Pool of Immortality) for spiritual purification is the major landmark of the place. The hard working and warm-hearted character of the people of Amritsar is conducive to the idea of hospitality which is very important for tourism promotion. About 70000 persons visit daily. On occasions the number swell to about 2 lakh people per day. Major constraints in the growth of tourism relates to inadequacies in tourism infrastructure, information dissemination system and inadequate promotion. The tourism strategy is linked with networking of following tourist interests through several circuits.



Strategy:

To promote tourism as a means of securing more meaningful and wider understanding of the region and its people, preserving and protecting the environment and at the same time achieving sustained economic development. This requires a multi-pronged action as identified below:

- Developing various forms of promotional material and its dissemination at a large scale, both nationally and internationally.
- Upgrading the infrastructure to facilitate connectivity and movement within the state. This will include road network, train linkages and national and international links.
- In terms of details, it is important to plan for various tourist circuits, cultural and religious destinations, eco-tourism and heritage sites.
- Enhance existing tourism infrastructure and increase the availability of facilities. This will include hotels of various categories, dharamshalas and resorts.
- Develop improved management systems for various tourist destinations. This will include maintenance, better security for the visitors, information systems and related aspects.
- Promoting various cultural activities such as folk-dances, music, local crafts, rural tourism, etc.
- Promoting Amritsar as destination for religious and spiritual tourism.

Projects:

The following projects have been identified for tourism promotion:

S. No.	Description of Project	Cost (Rs. in Cr.)
1.	Tourism Products including Cultural, Cuisine and Urban Haat etc.	25
2.	Establishment of International Convention Centre	25
3.	Sound and light show at Jallianwala Bagh	5
4.	Construction of new Vishram Sthal, Dharamshalas (tourist accommodations) etc.	10
5.	Development of arts and crafts villages	10
6.	Tourism development Program (including training, awareness & marketing / promotion through audio visual, literature, etc.)	5
7.	Construction of City level Multi-purpose Cultural Centre	25
	TOTAL	**105**

Total Project cost for tourism sector project is Rs. 105/- Crore. (Rupees One hundred and Five crore only).

9.5.1.5 Promotion of Trade, Education and Industry

Economic development through promotion of trade, education and industry are underway.

Special Economic Zone: A special economic zone is under development on Jalandhar-Amritsar road spread over 1000 acres . This would further the pace of development in Amritsar. Establishment and promotion of Indo-Pak trade route through free trade policy is another area of action by the national and state governments.

Regional Hub for Education: The city already houses institutions for higher education such as the university, medical college, dental college, engineering college, management, agriculture sciences, fashion technology, Centre Institute of Plastic Engineering & Technology and others which attracts students from the region all around Amritsar..

9.5.2 PLANNED CITY GROWTH

Goal: To facilitate a balanced growth with an efficient urban form devoid of congestion and conflicting land uses.

MCA will make a conscious effort at controlling the city sprawl in a phased and planned manner through preparation of Integrated Plan (Physical development, infrastructure and finances).

a) Controlling and guiding urban sprawl in a phased manner.

b) Planning and providing for infrastructure.

c) Applying innovative methods of using land as a resource to finance development.

The Identified projects as part of these components are distributed as part of capacity building component and integrated infrastructure development.

9.5.3 INTEGRATED INFRASTRUCTURE DEVELOPMENT

Goal: Provision of urban basic infrastructure in an efficient and equitable manner

Water supply and sanitation and urban transport are two critical elements of city infrastructure needing immediate attention. Two components have been detailed out as

a. Integrated Infrastructure Projects

b. Urban Transport Projects (such as Elevated Road to Golden Temple)

9.5.3.1 Integrated Water Supply and Sanitation Project

According to the draft report of 'Special Assistance for Project formation for Amritsar Water supply and Sewerage Project' by JBIC (Japan Bank for International Co-operation), major water and sanitation projects in the city are identified.

Issues:

- Only 76% of the populations coverage for water supply
- Only 56% of the population coverage for sewerage connections
- There is no sewage treatment in the city.
- No property enjoys a 24-hour supply – water services are limited to 11 hours per day.
- Many people have water pumps to compensate for the low mains pressure.
- Water losses are in the order of 61%.
- The intermittent nature of the water supply dominates the lives of the poor.
- Water is chemically fit for consumption but there are reports of micro-biological contamination.
- Many consumers have installed in-house water purifiers.
- Many consumers have installed their own tube wells.
- Most industries have an independent water supply.
- Sewer blockages are many and frequent.
- Sewage system frequently overflows.
- Grey water is often not reaching the piped sewerage system.
- Sewage pumped into nallahs on a daily basis, and at many locations
- Health and environmental conditions around the pumping stations are unsatisfactory.
- Nallahs grossly polluted with foul sewage and domestic refuse.
- Polluted water flows across international border into Pakistan.
- No pipe network asset location, condition or performance information kept.
- Metering of the water supply system is practically non-existent.
- Book-keeping at rudimentary levels, most maintenance is entirely reactive, and the only site records are operators log books (which are not necessarily accurate).

- New works designed with little regard to operator requirements.
- Low levels of engineering and Project Management competence.

Notwithstanding this the city is in a position to benefit greatly from a Project geared to address basic shortcomings in the functionality of its assets, which is closely aligned to building competences in the executing and the operating agencies, that improves the plight of the poorer sections of the community, and mobilizes the community to assist in its delivery.

9.6 ENVIRONMENTAL SERVICES NEED ASSESSMENT

Water Demand figures

Under the Code of Basic Requirements of Water Supply, Drainage and Sanitation (IS: 1172-1983), as well as the National Building Code of India 2005, a minimum design horizon demand of 135 Icpd is recommended for all domestic residences provided with a full flushing system. Non-domestic demand is added separately in accordance with tables provided in the codes, with demands varying in accordance with the property type and service provided. It is standard practice to add a further 15% of the demand to make allowance for water losses, bringing the effective per capita demand to 155 lpcd.

Increase in unit demand over time

The domestic consumption is taken as only 85 Ipcd due to the restraining nature of the existing distribution system. As new works are constructed and the existing system is rehabilitated under the Project, and other development programmes, this figure will steadily increase. However, for the purposes of system planning, we intend to adopt the design figure (135 Ipcd) from 2015 onwards.

The existing non-domestic consumption is approximately 6.1% of domestic consumption. This relatively low proportion reflects present circumstances in Amritsar in that many commercial, institutional and industrial water users do not use the MCA system due to its intermittent nature and unreliable water quality. It is anticipated that many non-domestic (commercial, institutional and light industry) customers will change from their current private source to tine MCA supply instead. Indeed, in the interests of conserving the groundwater aquifer it may be appropriate to enforce this change and ban the use of private wells in favour of a metered supply, as this will ensure better conservation of supplies and more effective regulation and monitoring of water use. Although difficult to judge, it is estimated that the proportion of non-domestic demand will increase. On a per capita basis the total (domestic plus non-domestic) design demand will therefore be 155 litres per day in the year 2015 (135 Ipcd plus 15%).

System Losses

Table 9-1: Unit Demand Forecasts

	2015	2025	2035	2045
Consumer group Domestic and non- domestic demand (Iced)	155	155	155	155
MCA system losses (% of production)	35	20	12.9	12.9
Private industrial demand(cold)	53	79	97	119

Total (MCA) Abstraction Figures

Total water abstraction figures have been prepared on a year-by-year basis up to 2025, and for 2045 (the ultimate design horizon - section 3.1). The following key assumptions have been made:

- Households in the currently un-served areas will convert from their private supplies to the MCA supply once adequate water is made available.
- Public standpipes will be phased out over the period 2011 to 2025 and will be replaced with a combination of house connections (50%), MCA metered taps organized by water user groups (30%) and hand-pumps (20%);
- Water tankers will not be used after 2011 after which they will only used for emergency use, or possibly for sewer flushing;
- The level of private household abstraction of water within the MCA boundary will be "frozen" at its 2012 value. It is proposed that, by this date, no new private tube wells will be permitted (as part of a range of measures designed to protect the aquifer); and
- PWSSB/MCA will continue to develop and expand the water supply system to serve further growth in population and the development of land around the city.

The table below compares the estimated current abstraction with. the Projection of future water requirements, taking account of water losses, and indicates the number of additional tube wells required with time. For the purposes of evaluating the overall water balance and calculating the Waste water flows, the table also includes an estimate of private water abstraction.

Waste water Flows and Loads

Assumptions

The assessment of future Waste water flows is based on estimates of the volume of water that will be supplied, both through the MCA system and via private tube wells, the proportion of water supplied that is discharged as Waste water, and the number of properties connected to the MCA sewerage system. The following key assumptions have been made:

- Waste water generated by domestic and non-domestic (commercial, institutional and light industry) customers amounts to 80% of the water supplied;
- Waste water from other (heavy) industries discharged into the MCA sewerage system constitutes around 15% of the domestic Waste water flow.
- Many individual large industries, such as Khanna Paper Mills, will continue to treat their own Waste water and discharge directly to nallahs rather than to the MCA sewerage system;
- 62percent of the 2005 population is served by the MCA system
- PWSSB/MCA will continue to develop and expand the city's water supply and sewerage systems to serve further development of land around Amritsar
- By the year 2025, 90% of the population will be served by the MCA sewerage system;
- By the year 2045 this percentage will have increased to 95% of the population; and

- An allowance of 5% has been made for infiltration.

With the support of PWSSB and JBIC a detailed project report has been developed. The population forecast has been presented in chapter 2. The design estimates have been done taking medium growth forecast for the year of 2025.

Strategy:

- Providing a safe and wholesome supply.
- 24/7 water availability.
- Water available at a reasonable pressure.
- Losses reduced to reasonable levels.
- Autonomous and accountable management with satisfactory performance culture.
- Full cost recovery.
- Surface water pollution to be significantly improved.
- Service equity and affordable access.
- Efficient Storm water management.
- Mobilizing the Community.

PROJECT SCOPE AND DESIGN (Water supply & Sewerage)

Components	Scope
A. Water Supply	
1 Construction of tube wells	35 (63.7 MLD)
2 Construction of Over Head Services Reservoirs (OHSRs)	15 (21600 ccm capacity, 6 hr storage)
3. Construction of Water Mains	Rising Main: 5.1 km, Distribution System: 123.9 km (17 new areas around the peripheries of Amritsar)
4. Installation of Production Meters	260 (All of existing public tubewells)
5. Asset Survey and Recording	The whole existing distribution system
6. Leakage Detection	3 pilot areas in existing distribution areas
7. Rehabilitation of Water Mains	17.7 km (3 pilot areas in existing distribution areas)
8. Construction and maintenance of House Connection with Meter	All house connections in 17 new development areas and 3 pilot rehabilitation areas (revolving fund may be established with cost recovery from consumers)
B. Sewerage	
1. Construction of Sewerage Treatment Plants (STP)	3 (76 MLD, 25 MLD, 100 MLD)
2. Construction of Small –scale Sewerage Treatment Plants	1 (catchments area: Vallah, Daburji, Sultanwind)
3. Construction of Interceptor Sewer Pumping Station	2 (new construction)
4. Construction of Low – Lift Pumping Stations	2 (new construction), 1 (rehabilitation)

Components	Scope
5. Construction of Sewers	Laterals: 183 km, Main sewers 47.1 km, (29 new around the peripheries of Amritsar)
6. Rehabilitation of the Nallahs	(a)13900 ft to be covered with double barrel 102"dia. sewerage (b) 4000 ft to be covered with 93"dia double barrel sewerage
7. Construction of House Connection	All house connections outside the residence boundary in 29 new areas
C Social Development and Community Participation	
D. Consulting Services	
1.Institutional Improvement	Employment of Institutional improvement manger in MCA and the consultant's assistance to MCA in improvement of business planning, assets management, leakage control, meter installation, enforcement of discipline on connection and payment, financial management, customer relations and human resource development.

The cost of the project is estimated as below.

Water-Sanitation		
Sl. No.	**Component**	**Amount (Rs. Crores)**
1	Tube wells	4.72
2	Water Mains	5.87
3	Rehabilitation & House Connections	41.39
4	OHSRs	10.95
5	Sewerage	90.96
6	Temporary Sewerage Treatment Plant	2.23
7	Major Sewerage Treatment Plant	70.53
8	Leak detection	0.78
9	Rehabilitation of WS & S Systems inside Walled City	50.00
10	Storm water Drainage Rehabilitation	0.35
11	Solid Waste Management	0.23
12	Social Development & Community Participation	1.32
13	Asset Survey	0.80
14	Misc	11.89
15	Project Development	20.00
	T O T A L	**312**

Note: The above project also includes project development costs

9.6.1.1 Transport

Goal: An integrated and sustainable trasportation system for the city of Amritsar in an affordable and efficient way, acceptable to the people, adequate to serve the future requirement, ensuring safty and security.

Issues

After conducting the site reconnaissance survey of the city and analysing the data collected from various sources, the following issues related to Traffic & Transportation System of Amritsar have been identified.

a) **Inadequacies in public transport:** Insufficient and over-crowded public transport and mass transit system, absence of standard fares for taxis, mixed vehicular traffic flow on all roads network, aabsence of separate track for vehicle, inadequate capacity of road in the old city
b) **Road Network:** Poor condition of road surface and pavements, constricted road widths within the walled city and congestion of main streets, unplanned intersections, inadequate and haphazard parking, absence of storm water drainage, and sewerage network location in the centre of the street.
c) **Traffic Management System:** Lack of traffic signals, unplanned signal cycles, inadequate traffic police staff, absence of signanges, encroachments, hawkings and inadequate lighting.
d) **Rail Network:** Absence of railway over bridges at the different level crossings create traffic congestion;
e) **Air transportation system:** Inadequate infrastructure facilities at International Raja Sansi Airport catering to needs of increasing number of national and international passengers

Strategy

The following strategies have been identified for planned and organized development of traffic and transportation in Amritsar:

- Promotion of efficient Public Transport system with introduction of mass rapid transport system.
- Capacity Building in existing public transport system with options for involving Public Private partnership (PPP), involvement of private sector etc.
- Intersection and Junction improvements.
- Development of railway over bridges in the major railway level crossing.
- Ensure smooth traffic flow by identification of designated parking areas mainly around the old core of the city.
- Development of traffic management system with proper signages and street furniture.
- Introducing strict traffic regulations for pollutin outdated vehicles.
- Mordernization of the railway station and air port.
- Promotion of Safe Pedestrian Movement.

Urban Transport Project

An integrated and sustainable trasportation system for the city of Amritsar in an affordable and efficient way, acceptable to the people, adequate to serve the future requirement, safe and secured for all generations need to be developed. Identified strategies are summarised below.

1. **Accessible Amritsar:** The strategy involves develoopment of inner city roads with pedestrian, non-motoroised and transit vehicular mobility, parking management plan and an overalll traffic Management Plan.
2. **Major Roadnetwork Improvement:** The strategy involves development of major roads, widening, construction of elevated roads, grade seperated treatments at junctions and railway crossings etc.
3. **Mass Rapid Transit System:** Developing a mass rapid transit system for the city of Amritsar is envisaged. Appropriate public trasnit technology suitable with the city heritage values would be choosen. An initial costs have been envisaed.

The project costs estimates are as below:

Table 9-2: Identification of Projects - Urban Transport

Sl. No.	Project	Project Descrption	Amount (Rs. Crores)
1	**Accessibile Amritsar (Walled City)**		**95.00**
1.a	Road Development/ Pedestrianisation	Developing 'pedestrian friendly precincts' with the traffic being rerouted. Besides, 1.5 - 2 meter wide pedestrian pathway, 3.0/2.5 Meterwide Bicycle way and amenities sit-outs, toilets, trees and shrubs, street vending places etc. Bus stops, Benches, Dust bins, Spittoons, Signage: directional, building wise and Information Kiosks.	15
1.b	NMV Support	Developing 'no vehicle zones' inside the walled city, facilities for non-motorised mobility, Demarcation of zones for informal activities and vendors so that traffic is not hindered.	10
1.c	Parking Management	Organized parking and multi storied parking lots to be introduced where possible, at present; about 4 such locations are under consideration.	30
1.d	Visual Intrusion (Cables, poles advt etc.,)	Making of overhead wires underground, removing of Electric/Telephone poles and street signages etc.	40
2	**Road network Improvement at City Level**		**1720**
2.a	Road Development	Development of major roads of the city (Resurfacing, Paving of pedestrian pathways, laying of Median, introduction of traffic islands etc. Feeder roads to facilitate the transit)	100
2.b	Bridges/Culverts/ROB	Construction of Bridges and cultverts	10
2.c	Construction of elevated road to	i) Golden Temple and over G.T. road, Phase I: Rs. 210 Crores (Annexure 10.1 Attached) ii) G. T. Road, Phase II: Rs. 300 Crores	510

Sl. No.	Project	Project Descrption	Amount (Rs. Crores)
2.d	Construction of ROB	▪ Near Emergency Ward ▪ Jora Phatak ▪ Phatak no. 22 ▪ Cherretta main bazar ▪ Near Sabji Mandi	100
2.e	Construction of Southern Ring Road		1000
3	**Mass Transit System Development**		**752**
3.a	Appropriate System Development	DPR Preparation for Technology choice and System design	2.0
3.b	System Infarstrucurte Developemnt	The focus is to enhance accessibility of with the Core area (Golden Temple) with other parts of the city	750
3.c	System Operation	PPP	N.A
	Urban Transport	**T O T A L**	**2567**

9.6.2 URBAN POOR & HOUSING

Goal: Access of Housing and basic service to the urban poor ensuring community participation and efficient service delivery

Issues

The major issues related to growing number of slums and the urban poor are the following:

- Increasing trend of slum population in Amritsar city
- Encroachment over valuable parcel of land present in the core of the city
- Inadequate infrastructure facilities in the Slum pockets with poor sanitary condition leading to unhygienic environment
- Power theft – illegal electric connection
- Improper accessibility with narrow unpaved streets
- Lack of awareness among the slum dwellers about different poverty alliviation programs under Central and State Government

9.6.2.1 Access to housing and urban basic services to the urban poor

Urban basic services for the poor have been integrated as part of the plan envisaged above. This component of the plan envisages building about 14000 housing units with necessary infrastructure facilities for the urban poor. According to a study on the housing stock of Amritsar, it is estimated that there is a need of about 13500-14000 housing units.

Table 9-3: On Need Asessment for Housing

No.	Year	Population	No. of Households	Housing Units	Housing Needs for urban poor	
					Existing	Required
1	2001	1011327	163118	212053	63616	
2	2010	1148746	198060	257478	77243	13627
3	2020	1391016	257596	334875	100463	23220

Strategy

1. Introducing EWS/ LIG housing schemes as part of relocation and rehabilitation program
2. Provision of basic infrastructure facilites – roads, water supply, sewerage, drainage, solid waste disposal, electricity

Table 9-4: Identified Projects: Housing/Basic Services for Urban Poor

Sl. No.	Project	Project Descrption	Amount (Rs. Crores)
1	Weaker Section Housing	Construction of 14,000 units of one-room tenaments (G+2) along with necessary infrastructure and services	**100**
2	Urban Basic Services	Providing basic infrastructure services to the urban poor	**20**
		Total	**120**

Note: The costs of Upgradation of slums by providing services is included as part of watersupply and sanitation project.

9.6.3 EFFICIENT AND RESPONSIVE MUNICIPAL CORPORATION

Goal: Good urban governance with holistic and sensible municipal management

The strategy to be adopted to bridge the gap between investment demands and the Corporations finance. While innovation and the commercialization of urban infrastructure will be a priority, the related actions that will determine good governance and management are as follows:

1. Expanding the Resource Base for Stable Revenue of Local Bodies

- Land Information System- create and update
- Land policy to permit use of Land. For this identification of suitable land assembly model for Amritsar has to be identified and adopted.
- Fiscal Transfer from Central to State and State to Local Bodies should be rationalized to ensure a better normative base and timely transfer
- Implementation of the State Finance Commission's recommendations in letter and spirit
- Improved access to external sources of funds through Municipal Bonds, pooled financing and other suitable instruments, create state level pool financing/Bond - Banks, and access to funds of affordable interest rates and longer tenure for urban infrastructure should also be made available from Pension funds, Provident fund and Insurance sector
- Shift to Unit Area or Capital value method of Property Tax base from rental value method
- Permission to tax Central and State Government Properties and other properties owned by Government Undertakings including utility service providers

2. Improved and Better Financial Management

- Shift to commercial accounting

- Promotion of Public Private Partnership in Urban Infrastructure is essential
- Enhancement of fiscal powers and devolution of functions to municipal bodies and resource availability based on recommendations of the Second State Finance Commission.
- State should promote performance linked Grants and Incentive-based funds should be created to accelerate the pace of reforms.
- Promotion of non-municipal agencies dealing with delivery of municipal services
- Timely Audit and use of private Chartered Accountants for routine audit and local audit for proprietary audit.

3. Agenda for Investing in the Reforms

- Set up a 'City Challenge Fund' to support investments in economic development activities and other investments/ incentives required for making the 'cities work'.
- Promote participatory and normative budgeting to improve municipal financial planning
- Strengthen staff capabilities through capacity building programs.

4. E - governance

Application e-governance is equally important for municipal finance. Adequate software development and application in the financial management sector is the imperative need required at different levels. The best practices should be widely disseminated and applied.

Total Project cost for Institutional development project is Rs. 10 Crore. (Rupee Ten crore only).

9.6.3.1 Identification of Projects

The following projects have been identified by the Consultants, which shall be implemented by the year 2006:

S. No.	Description of Project	Cost (Rs. in Cr.)
1.	Reforming & computerization of the existing system in MCA and other Zonal offices including purchasing of software	8
2.	Institutional strengthening	0.5
3.	Capacity building.	1
4.	Communication and Citizen Participation Programme	0.5
	TOTAL	**10.00**

Table 9-5: Summary of Sectoral Goals and Identified Projects

	Sectoral Goals	Sectors	Total Project Cost (Rs. in Cr.)
A	**Sustainable economic development**		
1	Conservation, preservation and development of heritage, culture (Urban Renewal)	Urban Renewal	36
2	Promotion of tourism	Tourism Development	105
3	Promotion of trade, education, and industrial sectors		

	Sectoral Goals	Sectors	Total Project Cost (Rs. in Cr.)
B	**Integrated infrastructure development**		
1	Integrated Water and Sanitation Project	Water and Sanitation	312
2	Urban Transport	Urban Transport	2567
C	**Planned City Growth**	Projects distributed as part of other sectors	…
D	**Improved access to housing and urban basic services to the urban poor**	Housing/basic services for Urban Poor	120
E	**Efficient and Responsive Municipal Corporation/Urban Governance**	Urban Governance	10
		Total	**3150**

For envisioning Amritsar 2025, the city identifies various sectoral goals along with the possible projects in each sector in the table above. The project cost for all the projects in various sectors is amounting to Rs. 3,150 Crores.

Table 9-6: Details of sectorwise Identified Projects with long term phasing

Sr. No.	Sectoral Goals and Identified Projects	Total Project Cost (Rs. in Cr.)	Long Term Project Phasing	
			Up to 2012	After 2012
A	**Sustainable Economic Growth**			
A1	**Conservation, preservation and development of heritage and culture (Urban Renewal)**	**36**	**36**	…
1	Preparation of detailed and comprehensive plan for urban renewal, conservation and design	5	5	…
2	Urban renewal including streets, katras and precincts. Suitable paving, storm water drainage and infrastructure	Part of Integrated Infrastructure	…	…
3	Special project for gates including restoration, cleaning and upgrading surrounding areas	15	15	…
4	Conservation of heritage buildings, including private buildings and their incorporation in public domain (With participatory Process)	15	15	…
5	Support public work, NGO's, public awareness etc.,	1	1	…
A2	**Promotion of Tourism**	**105**	**105***	…
1.	Tourism Products including Cuisine and Urban Haat etc.	25	25	…
2.	Establishment of International Convention Centre	25	25	…
3.	Sound and light show at Jallianwalabagh	5	5	…
4.	Construction of new Vishram Sthal, Dharamshalas (tourist accommodations) etc.	10	10	…

Sr. No.	Sectoral Goals and Identified Projects	Total Project Cost (Rs. in Cr.)	Long Term Project Phasing	
			Up to 2012	After 2012
5.	Development of arts and crafts village	10	10	…
6.	Tourism development Program (including training, awareness & marketing / promotion through audio visual, literature, etc.)	5	5	…
7.	Construction of City level Multi-purpose Cultural Centre	25	25	…
B	**Urban Infrastructure and Transportation**			
B1	**Water-Sanitation**	**312.00**	**312.00**	…
1	Tube wells	4.72	4.72	…
2	Water Mains	5.87	5.87	…
3	Rehabilitation & House Connections	41.39	41.39	…
4	OHSRs	10.95	10.95	…
5	Sewerage	90.96	90.96	…
6	Temporary Sewerage Treatment Plant	2.23	2.23	…
7	Major Sewerage Treatment Plant	70.53	70.53	…
8	Leak detection	0.78	0.78	…
9	Rehabilitation of WS & S Systems inside Walled City	50.00	50.00	…
10	Storm water Drainage Rehabilitation	0.35	0.35	…
11	Solid Waste Management	0.23	0.23	…
12	Social Development & Community Participation	1.32	1.32	…
13	Asset Survey	0.80	0.80	…
14	Miscellaneous	11.89	11.89	…
15	Project Development	20.00	20.00	…
B2	**Urban Transport**	**2567**	**1247**	**1320**
1	**Accessible Amritsar**	**95**	**95**	…
1.a	Road Development/Pedestrianisation	15	15	…
1.b	NMV Support	10	10	…
1.c	Parking Management	30	30	…
1.d	Visual Intrusion (Cables, poles advt etc.,)	40	40	…
2	**Road network Improvement at City Level**	**1720**	**400**	**1320**
2.a	Road Development	100	100	…
2.b	Bridges/Culverts	10	10	…
2.c	Construction of elevated road	510	210	300

Sr. No.	Sectoral Goals and Identified Projects	Total Project Cost (Rs. in Cr.)	Long Term Project Phasing	
			Up to 2012	After 2012
2.d	Construction of ROB	100	80	20
2.e	Construction of Southern Ring Road	1000	…	1000
3	**Mass Transit System Development**	**752**	**752***	…
3.a	Appropriate System Development	2	2	…
3.b	System Infrastructure Development	750	750	…
3.c	System Operation	N.A	N.A	…
C	**Housing/Basic Services for Urban Poor**	**120**	**120**	
C1	Housing for urban Poor	100	50**	…
C2	Urban Basic Services for Poor	20	20	…
D	**Urban Governance**			
D1	Capacity building, E-governance, Urban Finance	**10**	**10**	…
	Total Project Cost	**3150.00**	**1830**	**1320**
	* Projects to be developed under PPP (105+752=857)		857	…
	** 50% of the project cost (Rs. 50 Crores) to be contributed by the beneficiaries		50	
	Net Total Project Cost		**923**	**1320**

The table above illustrates the distribution of total project cost of Rs. 3150 crores. For the year 2012, the projects with the cost of Rs. 1830 crores should be implementated. Total investment requirement for the city is Rs. 923 crores as it is planned that the projects of Rs. 857 crores will be implemented with the Public-Private Partnerships, additional Rs. 50 crores will be contributed by the benificiaries of the housing for urban poor. On the basis of the vision statements and sectoral goals, the city identifies the priorities of the projects as shown in the table below.

Table 9-7: Total investment requiredments with priority ranking

	Sectors	Total Project Cost (Rs. in Cr.)	Priority Ranking
A	**Sustainable Economic Growth**		
	Urban Renewal	36	**5**
B	**Integrated Infrastructure and Transportation**		
B1	Water and Sanitation	312	**1**
B2	**Urban Transport**		
1	Accessible Amritsar (walled city)	95	**2B**
2	Road Network Improvement	400	**2A**

	Sectors	Total Project Cost (Rs. in Cr.)	Priority Ranking
C	**Urban Basic service and Housing for Urban Poor**		
C1	Housing/basic services for Urban Poor	50	**6**
C2	Basic service for Urban Poor	20	**3**
D	**Urban Governance**	**10**	**4**
	Total	**923**	

CHAPTER - 10: FINANCING STRATEGIES

10.1 INTRODUCTION

The Capital Investment Plan is the multi- year scheduling of public improvements and investments. The scheduling or phasing of the plan is based on studies of the fiscal resources availability (for new investments and O & M), technical capacity for construction and O & M and the choice of specific improvements to be constructed for a period of five years into the future.

This section includes estimation of investment requirement to achieve the city development and infrastructure goal in multi year scheduling till 2025. Specific projects, however, will emerge out of detailed project reports etc. and will be prepared on the basis of city development strategies.

10.2 FINANCIAL OPERATING PLAN

The FOP is developed by projecting the operating elements of the municipal fund – the revenue account, based on certain assumptions on the anticipated trends in income and expenditure and the tax collection efficiencies. The projected operating surplus of the Municipal Corporation in a pre-investment scenario is used as an indicator of leveraging capacity of the municipal fund to undertake capital investments in a medium-to-long term.

The following sections elucidate the basic assumptions adopted in projecting the revenue account of the Municipal fund. The growth rates adopted are based on consultations with Municipal officials and are guided by past trends (Refer Annexure 10.1).

Table 10-1: Assumptions for Projecting Revenue Income

Sl.	Description	Demonstrated CAGR (%)	Adopted CAGR (%) upto 2031	Remarks for Adopted Growth Rate
A	**Taxes**			
1	Octroi / Chungi / Toll	11.21%	11%	Past trends expected to continue – this item would feature as a assigned revenue / grant w.e.f September 2006, in lieu of Octroi abolition
2	House Tax	9.79%	16.99%	Derived based on rationalized tax rates/ base and enhanced collection efficiencies upto 85% as against current 40%)
3	Excise Duty	144.25%	10%	Nominal Growth Rate
4	Advertisement tax	22.65%	15%	Nominal Growth Rate
5	Show Tax	-1.61%	5%	Nominal Growth Rate
6	Entertainment Tax	9.27%	10%	Nominal Growth Rate
7	Vehicle Animals and others	12.59%	10%	Nominal Growth Rate
	Sub-Total A	20.85%	11.68%	Derived based on above
B	**Fees & Charges**			
1	Building Fee & Development Charges	2.34%	5%	Nominal Growth Rate
2	Scavenging Fee	8.42%	10%	Nominal Growth Rate
3	Slaughter House Fee	-1.48%	5%	Nominal Growth Rate
4	Water Charges & Sewerage Charges	21.17%	15%	Nominal Growth Rate

Sl.	Description	Demonstrated CAGR (%)	Adopted CAGR (%) upto 2031	Remarks for Adopted Growth Rate
5	Other fees of MTP public development charges	19.76%	15%	Nominal Growth Rate
6	License fee	11.51%	10%	Nominal Growth Rate
7	Composition fee octroi	-35.61%	10%	Nominal Growth Rate
8	Others	-19.75%	10%	Nominal Growth Rate
	Sub-Total B	17.67%	14.48%	Derived based on above
C	**Income from Municipal Property (excl. sale of Land)**			
1	Rent on Land & Markets (property)	3.73%	5%	Nominal Growth Rate
2	Tehbazari (Rent from Vendors)	0.75%	2%	Nominal Growth Rate
3	Others	-49.23%	5%	Nominal Growth Rate
	Sub-Total C	-34.45%	4.31%	Derived based on above
	Sub-Total Own Sources (I=A to C)	13.59%	12.42%	Derived based on above
	Grants & Contributions	--	--	--
	Grand Total Revenue	**7.99%**	**12.42%**	**Derived based on above**

Table 10-2: Assumptions in Projecting Revenue Expenditure

Sl.	Description	Demonstrated CAGR (%)	Adopted CAGR (%) upto 2031	Remarks for Adopted Growth Rate
A	**Establishment Expenditure**			
1	Total Establishment Expenditure (Salaries & Contributions)	5.32%	8%	Assumed based on inflationary rates and providing for Pay Commission revisions
B	**O&M Expenditure**			
1	General Administration	28.08%	10%	Nominal Growth Rate
2	Octroi Administration & Collection	18.61%	10%	Nominal Growth Rate
3	Tax Administration & Collection (House Tax)	-23.01%	10%	Nominal Growth Rate
4	Fire Services	7.16%	10%	Nominal Growth Rate
5	Street Lighting	21.37%	15%	Nominal Growth Rate / Past Trend
6	Water Supply	21.38%	15%	Nominal Growth Rate / Past Trend
7	Health / Sanitation	27.76%	15%	Nominal Growth Rate / Past Trend
8	Roads & Bridges (Nigam Engg. & Supporting staff)	14.49%	10%	Nominal Growth Rate
9	Medical & Health Facilities	7.10%	10%	Nominal Growth Rate
10	Leisure, Recreation & Entertainment Services (Gardens, Stadium, Gym, etc.)	-0.68%	5%	Nominal Growth Rate
11	Other Services (Public Safety, Cattle Pounds, Slaughter House, etc.)	43.91%	10%	Nominal Growth Rate
12	Miscellaneous Expenditure	38.92%	10%	Nominal Growth Rate
13	Tehabzari	9.00%	9%	Nominal Growth Rate
14	Building Application fee	20.46%	10%	Nominal Growth Rate
	Sub-Total O&M	**23.77%**	**13.59%**	**Derived based on above**
	Total Revenue Expenditure	**11.62%**	**11.02%**	**Derived based on above**

The projected revenue income and expenditure based on the above assumptions are presented in the Financial Operating Plan. The annual revenue surplus (operating surplus) of the Municipal Corporation for 2006-07 is projected at Rs. 25 crore, and would increase to Rs. 222 crore by 2015 and Rs. 795 crore by 2031 in a pre-investment scenario.

Investment sustenance Assessment

The total investment sustainable over a 5-year period (2007-08-2011-12) is Rs. 1,086 crore (at 2006-07 prices) on a normal scenario, based on the available revenue surplus and assumed funding patterns. The investment sustenance has been determined through an iterative process, starting with the available revenue surplus and taking into consideration the implications of the capital investments in terms of additional O&M costs (2.5% of investment), additional revenues (75% of O&M costs), debt servicing (as per terms of debt as listed below) and other charges (contribution to revolving fund @ 25% of JNNURM grant from GoI).

Funding Pattern

The funding pattern adopted is as follows:

JNNURM grant from GoI	–	50% of the Investment
JNNURM grant from GoP	–	20% of the Investment
Municipal Own Source / Borrowings	–	30% of the Investment

The terms of debt adopted[5] are:

Interest Rate	–	11% per annum
Tenor	–	15 years
Moratorium (Principal)	–	5 years

The assessed sustainable investment of Rs. 1,086 crore is on the conservative side and may comprise only of JNNURM-eligible projects to be implemented over a 5-year horizon. AMC would be in a position to undertake further investments through fresh borrowings after about 10 years. The sustainable investment at current prices (assuming an escalation rate of 5% per annum) would be about Rs. 1,200 crore.

In addition, the Corporation is in a position to leverage its vast land bank (about 525[6] Acres,) to develop projects on a PPP basis, using land as their resource. These resources could be leveraged to develop retail tourism-related collateral infrastructure to cater to the demands of the several tourists that visit Amritsar from all over the world. Such investments, in addition to being financially self-sustainable would promote local economic activity and provide a regular source of revenue to the Municipal Corporation for the long-term.

[5] These terms are indicative, based on a standard term sheet of the IL&FS-promoted Pooled Municipal Debt Obligation Facility

[6] Prevalent market values ranges from Rs. 5000 to Rs. 80,000 per sq. yard

Since the duration of the JNNURM is seven years beginning from the year 2005-06 the investment requirements of 2006-12 is considered as Phase-I of the development process, and detailed out below:

The financial operating plan for Phase I (2006 –12) stated below:

Table 10-3: Proposed Investment Phasing (Amount in Rs. Crores) at 2006-07 Prices

No.	Sectors	Total Sectoral Outlay	Estimated Outlay (2006-12)						Total
			2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	
1	**Urban Renewal**	**36**	**4**	**5**	**6**	**7**	**7**	**7**	**36**
2	**Water-Sanitation**	**312**	**10**	**40**	**50**	**65**	**70**	**77**	**312**
3	**Urban Transport**	**495**	**75**	**170**	**70**	**70**	**65**	**45**	**495**
a	Accessible Amritsar (Walled City)	95	5	20	20	20	15	15	95
b	Road network Improvement at City Level	400	70	150	50	50	50	30	400
4	**Housing for urban Poor**	**70**	8	14	18	15	10	5	**70**
a	Weaker Section Housing	50	5	5	10	15	10	5	**50**
b	Urban Basic Services	20	3	9	8	0	0	0	**20**
5	**Urban Governance**	**10**	1	2	2	2	2	1	**10**
	Total Project Cost	**923**	**98**	**231**	**146**	**159**	**154**	**135**	**923**

Table 10-4: Proposed Investment Phasing (Amount in Rs. Crores) at current Prices

No.	Sectors	Total Sectoral Outlay	Estimated Outlay (2006-12)						Total
			2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	
1	**Urban Renewal**	**36**	4	5.25	6.62	8.10	8.51	8.93	41.41
2	**Water-Sanitation**	**312**	10	42.00	55.13	75.25	85.09	98.27	365.73
3	**Urban Transport**	**495**	75	178.50	77.18	81.03	79.01	57.43	548.15
a	Accessible Amritsar (Walled City)	**95**	5	21.00	22.05	23.15	18.23	19.14	108.58
b	Road network Improvement	**400**	70	157.50	55.13	57.88	60.78	38.29	439.57
4	**Housing for urban Poor**	**70**	8	14.70	19.85	17.36	12.16	6.38	78.45
a	Weaker Section Housing	50	5	5.25	11.03	17.36	12.16	6.38	57.18
b	Urban Basic Services	20	3	9.45	8.82	0.00	0.00	0.00	21.27
5	**Urban Governance**	**10**	1	2.10	2.21	2.32	2.43	1.28	11.33
	Total Project Cost	**923**	**98**	**242.55**	**160.97**	**184.06**	**187.19**	**172.30**	**1045.06**

Based on above phasing, the total investment requirement at current prices (assuming an escalation rate of 5 percent/annum), during 2006-07 to 2011-12 works out to Rs. 1045 Crores.

Table 10-5: Project Funding Pattern under JNNURM

Mode of Funding	Funding Pattern	Total Cost	Financing operating Plan in Rs./Cr.						Total
			2006-07	2007-08	2008-09	2009-10	2010 - 11	2011 - 12	
Grant from GOI under JNNURM	50%	461.5	49	115.5	73	79.5	77	67.5	461.5
Grant from State Govt.	20%	184.6	19.6	46.2	29.2	31.8	30.8	27	184.6
MCA	30%	276.9	29.4	69.3	43.8	47.7	46.2	40.5	276.9
Total requirements	**100%**	**923**	**98**	**231**	**146**	**159**	**154**	**135**	**923.00**
Percentage funding			**11**	**25**	**16**	**17**	**17**	**15**	**100**